This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

+ *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.

+ *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.

+ *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.

+ *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at `http://books.google.com/`

T 6617.15.485

HARVARD COLLEGE
LIBRARY

GIFT OF THE
GRADUATE SCHOOL
OF EDUCATION

3 2044 102 873 494

A CANNING LESSON

A SECOND COURSE IN HOMEMAKING

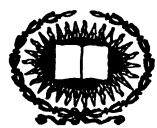
WITH TWO HUNDRED INEXPENSIVE
COOKING RECEIPTS

BY

MABEL HYDE KITTREDGE

President of the Association of Practical Housekeeping
Centers of New York City.

Author of "Practical Homemaking"



NEW YORK
THE CENTURY CO.
1915

Educ T 6619.15.485

HARVARD COLLEGE LIBRARY
GIFT OF
GRADUATE SCHOOL OF EDUCATION
May 7, 1930

Copyright, 1915, by
MABEL HYDE KITTREDGE

TO THE MANY FAITHFUL INSTRUCTORS
WHO IN THE PAST AND IN THE PRESENT ARE
RESPONSIBLE FOR THE WORK OF
THE ASSOCIATION OF
PRACTICAL HOUSEKEEPING CENTERS.

CONTENTS

CHAPTER		PAGE
I	PRESERVING FRUITS	3
II	CITY REFUSE	12
III	LAUNDRY WORK	29
IV	BAKING LESSONS	52
V	SENSIBLE DIET	59
VI	DIVISION OF INCOME	70
VII	MARKETING	80
VIII	CARE OF CHILDREN	97
IX	FOOD FOR INFANTS	118
X	FOOD FOR CHILDREN BETWEEN ONE AND FIVE YEARS OF AGE	127
XI	A HOT WEATHER LESSON	140
	INEXPENSIVE COOKING RECEIPTS	155
	INDEX	239

FULL PAGE ILLUSTRATIONS

	FACING PAGE
A canning lesson	*Frontispiece*
After the sheets have been laundered	40
Kitchen work after baking lesson	56
After the cooking lesson	161

PREFACE

The object of this book is to teach homemaking by doing the actual work connected with the home.

Talking about work is not doing work. This book is written for those who would make their hands their perfect tools. To do this, theory and study must go hand in hand with action. No lesson is learned when you can recite it; it is still a lesson until you can do it; only then it becomes a habit, for a habit is "aptitude or facility acquired by doing frequently the same thing." We are told too that habit is also "an action which by repetition has become easy, spontaneous, or even unconscious." The method of teaching homemaking in a Housekeeping Center is action with explanation interspersed; never explanation with action interspersed.

The season of the year is considered in the arrangement of the chapters; as for instance "Preserving Fruits" comes naturally as Chapter I, to be studied at the beginning of the school year, when fruit is plentiful.

In the preparation of "A Second Course in Homemaking" I wish to acknowledge my indebtedness to the authors of the following books: "How to Feed Children," by Louise E. Hogan (J. B. Lippincott Company); "The Care and Feeding of Children," by L. Emmett Holt, M.D. (Appletons); The Library of the American School of Home Economics; "Food and Dietetics," by R. Hutchison (Wm. Wood & Co.); "Methods for Home Laundering," by Mary Beals Vail (Procter & Gamble Co.); "Home Economics," by Maria Parloa (Century

Company); "Wage Earners' Budget," by Louise E. More (Henry Holt & Co.); "Laundry Manual," by L. Ray Balderston; "Sanitation of the Isthmus," by Joseph Bucklin Bishop (*Scribner's Magazine*); and for information on flies to C. G. Hewitt and G. S. Graham-Smith. I am especially indebted for personal help to Edward D. Very, engineer; Miss Bernice Laura Van Nest, domestic scientist; Miss Ada Beazley and Miss Lena T. Allison, trained nurses; and Miss Mary Smith of the Babies Hospital of New York. Some of the cuts are drawn from designs in the catalogue of Best & Co., of New York.

To Mrs. Fannie Merritt Farmer, to the author of "The Century Cook Book" and the compiler of "The Hartley House Cook Book," I acknowledge my indebtedness for some of the receipts in this book.

MABEL HYDE KITTREDGE.

62 Washington Square, New York,
February 1, 1915.

DIRECTIONS TO TEACHERS

For pupils who have completed the first year's work in the science of making a home, as taught in "Practical Homemaking," the following review will need only careful reading before beginning this book. If they have been well taught the work will be approached with a keen interest and quick comprehension. Their minds will be orderly and their hands skillful. The habit has been acquired (or should have been) of doing nothing less than the best work. For girls who are beginning the study of homemaking two or three weeks of preliminary housecleaning is a necessity before studying the advanced course. Every kind of work mentioned in this review can be actually performed by the pupils as they put their house in order. Then as they study the chapters in this book, with every lesson should come the opportunity to repeat these necessary tasks of homework, until the acts become easy and spontaneous.

REVIEW ON SUMMARY OF "PRACTICAL HOMEMAKING"

The House Itself.

Select, if possible, a western or southern exposure. Sun helps toward cheerfulness, health, and cleanliness.

Have as many rooms with direct air as possible. Shun air-shafts and inner rooms.

Make the landlord paint the walls; papered walls are places for dirt and vermin to hide. Dirt of all kinds is brought in from the street on boots and clothing. Such dirt falls on the floor; be sure, therefore, that every floor in your house will wash. Carpets do not wash.

Choose a few good pictures rather than many that give no pleasure. Don't hang a picture that you do not enjoy just because you have it.

Buy furniture that can be dusted in every part with a damp duster.

Be sure that the curtains are short and can be washed easily.

Study color, so that your rooms will suggest light, restfulness, and harmony.

Strive for space rather than for things. Give away all that you do not need. Throw away what is useless.

The tenement law reads:

"No room in any tenement shall be so overcrowded that there shall be afforded less than 400 cubic feet of air to each adult and 200 cubic feet of air to each child under 12 years of age." Remember this law.

The Stove.

Know your stove; be able to take it apart and clean every corner of it.

The damper (the door in the chimney) must be open when the fire is starting, and closed as soon as possible to save heat.

The draft (the door under the fire-box) should be opened when a greater combustion of coal is wanted; but when slower combustion is adequate, close the draft and save coal.

The check is over the fire-box, and is for the purpose of checking the fire when it is burning too fast or when a slow fire is wanted. Never light the morning fire until the stove inside and out is clean.

Always lay the paper and wood lightly. Remember that it is the circulation of air that makes the fire burn. A stuffed fire cannot burn. Coal is saved by closing the damper and the draft, as combustion is then less. Coal is wasted by leaving open the damper and the draft when unnecessary.

Dish-washing.

Scrape dishes thoroughly before piling, and pile them before washing. Wash only in very hot soap or soda water; rinse in clean hot water; drain on tray before wiping, thus saving dish-towels. Use dish-cloth, not mop, for washing dishes, and be sure you have plenty of clean dish-towels.

Wash towels, and stretch, not throw, them on a clothes-horse after every dish-washing.

Cleaning.

Never begin to clean until sure that all cloths, soaps, powders, and anything that can be needed for the cleaning are at hand. White, or natural, wood is cleaned with Dutch Cleanser or Sapolio, never with soap.

Woodwork is dusted with a damp duster; never with a dry one, except in the case of polished mahogany.

Beds are cleaned with kerosene frequently, and with a solution of carbolic acid when necessary.

Pipes of all kinds are kept free from the accumulation of grease by never washing an unscraped dish, never pouring anything down the toilet that is not clear liquid, and washing out all pipes several times a week with boiling soda water.

Bath-tubs are kept clean by every member of the family washing out the tub with soap and hot water after each bath. At least once a week the tub should be washed with kerosene.

Wash-tubs are kept clean, first, by never using them for any purpose except the washing of clothes, and, second, by wiping dry every crack and hidden corner after each washing.

Garbage-can. Line with newspaper and wash often with soda water.

Tinware. Use Bon Ami to polish, and always keep dry.

Ironware. Kerosene and ashes will take off rust. Soda added to hot water will clean when greasy.

Ice-box. Window-box. Clean with hot suds every day, except in very cold weather, when every other day is sufficient. Do not consider the ice-box cleaned until every crack is free from all grease and odor. Use soda water twice a week.

Windows. Wash with Bon Ami or with water and a little kerosene. Add alcohol in freezing weather. Polish hard.

Brass. This should be rubbed over with dry chalk or sil-

icon after it has been thoroughly cleaned with brass polish. It will keep bright twice as long.

Silver. After cleaning with silver polish, never forget to wash all pieces of silver in clear hot water.

Cleaning a Room thoroughly. Dust all movable objects and take them from the room that is to be cleaned before beginning the hard cleaning.

Beds.

Remember that we spend one-third of our lives in bed. No thought and care is too much to give to this very important subject.

Points to be studied about beds:

First, what to buy in the way of beds, mattresses, sheets, blankets, etc.

Second, the proper way and time to air a bed.

Third, how to make a bed with square corners correctly.

Fourth, how to care for the sick in bed; changing sheets with patient in bed, etc.

Fifth, how to prevent bedbugs, and how to get rid of them if they come.

Bluing (not liquid). For laundry work.

Starch. For laundry work.

Stove blacking. Paste, not enamel. Enamels are difficult for children to apply because of lack of strength. They are expensive.

Bluing, in liquid form, is usually a compound of ferro-ferric oxide; that is, an iron compound, and injurious to clothes in combination with an alkali. Soap is an alkali; therefore, clothes not well rinsed, after bluing, will often show rust-marks.

Necessary Cleansing Material.

Sal-soda. For cleaning where grease has collected; also for dish-washing in Jewish homes.

Soap —

Brown soap. For laundry and cleaning. Buy soap with the least amount of resin.

White soap. Use for white paint and fine laundering.

Scouring Material.

Coarse, scouring soap for iron and steel ware.

Fine scouring soap for windows, enamel, nickel and tin.

Scouring powders. For unfinished wood and tinware.

Kerosene, plain or with sifted ashes. For cleaning zinc, removal of rust, cleaning bath-tubs when stained, knives, iron sinks, etc. As a vermin preventive, kerosene is excellent.

Brass polish. Liquid or paste.

Silver polish. Whiting or prepared polish.

Vermin destroyers. Carbolic-acid preparations; corrosive sublimate prepartions.

Disinfectants, without oils. For mattresses, general dusting, especially, in cracks and dark places.

Sulphur preparations. For destroying and preventing roaches, ants, etc.

Alcohol. To prevent water from freezing.

Ammonia. Use after cleaning bath-tub with kerosene. Soak handkerchiefs in ammonia water. Use sparingly in laundry work. Ammonia water brightens rugs.

Chlorid of lime. For sinks and water-closets.

"When we speak of training the senses, just what do we mean? Do we not mean that we propose to train the child to see correctly or accurately, to touch deftly and to learn more and more by touching, and to hear with precision in regard to tone, time, rhythm and inflection? All this is, obviously, training in accuracy, in doing whatever we do just right, and not about right, or well enough. . . . When we require a boy to plane a board to a true level, or a girl to produce a pudding or cake from a well-expressed, accurate receipt, we are training him or her to win moral effects on his or her character as well as a material result. To do a mechanical or artistic piece of work thoroughly is much more than the material operation; it is a moral achievement. . . .

"All the while the child should have it in mind that he is acquiring arts and faculties which will enable him to make himself useful to others."

Charles W. Eliot.

A SECOND COURSE IN HOMEMAKING

A SECOND COURSE IN HOMEMAKING

CHAPTER I

PRESERVING FRUITS

Note to Teachers.

In this lesson make the head learn through the hands. One week the class can study the dried fruits, and cook at least one of them. Another week the lesson will be canning; then preserves and marmalade, and in a fourth week the class can make the fruit into jelly. Before beginning to work, the kitchen table should be prepared with all needed fruit and working utensils. The material and jars, for this preserving, should be brought from home by the pupils, and the filled jars or glasses, being the property of the girls, can be taken home by them. All utensils, including jelly-bag, must be on hand before beginning the work.

The method of learning this lesson on canning will be by doing the work in the fruit season, not by studying about it during the months of the year when the fruits are out of season. Certain fruits are in season in the spring and others in the autumn. It is, therefore, well to divide all fruit-preserving lessons between these two seasons. Have two or three lessons at the beginning of the school year, and two or three more before school closes. For our autumn lessons we will buy pears, peaches, plums, or grapes, as this is the season when they are ripe and most plentiful in the markets. For the spring lessons we will buy berries, cherries, or pineapple.

Different Ways of Preserving Fruits.

Fruits are best liked when served ripe, and in season, but the season is a short one, and when winter comes fruits are not only difficult to get, but are too expensive for the majority of people to buy. We do well to store fruits for winter when they are cheap in summer.

There are different ways of preserving fruits in season so that they may be used out of season. They may be dried in ovens or in the sun, so that all water is evaporated. Dried fruits, such as apples, peaches, apricots, dates, raisins, when boxed and sealed, keep an indefinite length of time. They can be purchased by the pound at any grocery store. Other ways of keeping fruits are to preserve them in a heavy sugar solution, to reduce them to juice, or jelly, and still another way is canning.

Food Value of Fruit.

Most fruits have but little nutritive value, the average amount of water being 85 per cent., but our systems need this water. We need also the mineral properties of fruit, and the odor and flavor act as a stimulant to the appetite and as an aid to digestion.

There are a few fruits that have a high nutritive value, and these are the dried ones: dates, figs, prunes, and raisins. Raisins have the highest per cent. of nourishment, and prunes the next highest.

The dried date is a staple article of diet in Egypt. Half a pound of dates and half a pint of milk are food enough for a meal for a man.

Half a pound of dried figs is more nourishing than half a pound of bread. A pint of milk and six ounces of figs are a hearty meal.

Prunes are dried plums; they not only have a high value as food, but have a laxative quality which is one

reason why they are given to children as a means of regulating the bowels.

Fruits are dried in great sheet-iron stoves, which look like tall towers. These stoves have a number of wire-netting shelves, one on top of the other. The fresh-cut fruit is laid on these shelves. A fire is built at the bottom of the stove, and the fruit is bathed in steam vapor until all moisture has passed out of it in the form of steam, leaving the fruit dry. In this dried condition it is packed into boxes and sealed.

The receipts for cooking dried fruits are on page 220. Cook one or more in class. Try the others at home.

Cooked fruit is more digestible than raw fruit. It takes the stomach over three hours to digest two raw apples, while a cooked apple will digest very quickly. The acid in raw fruit, if at all unripe, causes irritation to the intestines. Diarrhœa and colic are often the result of eating unripe fruit.

Canning.

In canning fruits the flavor of the fruit is preserved better than in any other way, since less sugar is used in canning than in preserving. Therefore, this means of preservation gives us the best substitute for fresh fruit. Canning fruit is simply putting sterilized fruit into sterilized jars, and making the jars air-tight and water-tight. Sugar may be used or omitted. When we use the word sterilize, we mean killing all bacterial life by means of heat. To sterilize our jars we simply boil them until all possible bacterial life has disappeared.

Buying in quantity is the cheapest way to buy fruits. Much better value can be obtained for your money by buying by the crate or the basket rather than by the pound. Do not buy from stands or from carts, as it is

very necessary to have fresh fruit for all canning and preserving. Fruits for canning should be firm, fresh, and ripe, but never overripe, as overripe fruit ferments, even though it has been boiled and put up in air-tight jars.

After purchasing the fruit, the sugar, and as many one-quart jars as will hold the fruit desired, the next thing to do is to prepare the table, as we would in a cooking-lesson. Surely every girl who reads this chapter in the homemaking course has learned the lesson, that she must never begin to cook until everything she needs is ready on the kitchen table.

Draw the table into the middle of the kitchen, away from the wall; for the preservation of the wall and for the greater convenience of the cooks. Cover the table with a paper. Collect all materials, fruit, sugar, jars, and cooking utensils. These utensils are: pan, in which to sterilize the jars; kettle for cooking the fruit (this should be of agate or enamel, never of tin); wooden or silver spoon for filling the jars and for stirring the fruit; a working plate; a cloth for standing jars on and wiping them; silver knife; funnel for filling jars with small fruit (the larger fruit is dropped into the jars with the spoon); scales; measuring-cup; brush for cleaning the fruit; paring-knife; quart jars, and covers; rubber rings; colander for washing berries and draining the water from the fruit, as an excess of water will make the fruit tasteless.

Go carefully over the receipt and notice for yourself what utensils and what materials will be needed in this canning lesson. Not until these are on the kitchen table, and every girl wears a large apron and has perfectly clean hands, and the kitchen fire is at its best, is it time to begin work.

In canning we use glass jars with tight-fitting covers

and rubber rings. The jars and covers may be used for years, but the rings should never be used but one year, as the rubber becomes porous, and will let in the air if used a second time.

To Test Jars.

Wash the jar, the cover, and the rubber ring in soapy water, and rinse. Fill the jar with clear water, put on cover and rubber ring, and turn it upside down, allowing it to stand in this position for some little time. If the water comes from under the cover, the jar is not water-tight, and it is useless to sterilize it, as the best sterilization will not make it fit to use for your canning. Remember it is by keeping all air from the fruit from the time it is canned until the time it is used, that prevents fermentation.

After testing the jar in this way and finding it is not tight, it can sometimes be made air-tight by putting on a different rubber ring or a different cover, but never use a jar until it will stand this water test. After you have proved them air-tight, sterilize your jars.

To Sterilize Jars.

Wash the jars, and fill with cold water. Set them in a pan of cold water, having the entire jar well covered. Put this pan with jars on the fire and let the water slowly come to the boiling point. Boil for at least five minutes. While the jars are being sterilized, prepare the fruit for them, for they should be filled with the fruit while still hot.

The covers should stand in the boiling water at least five minutes, but the rubber rings should be dipped in and taken out at once. Never allow the rubber to boil in the hot water, as water softens it.

General Rules for Canning Fruit.

All fruit should be washed in cold water, never in hot or warm water. If berries are being canned, hull them after washing. Cherries may or may not be stoned. Pears are cut in half, pared, and the core taken out. Peaches are pared, and the stone taken out. Apples are pared, cut in quarters, and the core taken out. Plums are skinned by scalding them in boiling water. The stone of the plum need not be taken out for canning. Grapes are skinned for jelly and marmalade, but are not skinned for canning. Rhubarb is peeled before canning.

While thus preparing the fruit, the syrup can be cooking on the stove. As has been said, sugar does not necessarily need to be used, but it helps to keep the fruit from fermenting. For all fruits, such as plums, cherries, and berries, make a syrup of one cup of sugar and three cups of water. This amount of syrup is sufficient for each jar of fruit. For sweeter fruits, such as peaches and pears, use three-fourths of a cup of sugar and three cups of water for each jar. While the syrup is boiling, put the prepared fruit into the syrup carefully, so as not to break it. Cook until the fruit is tender. To know if the fruit is tender, the pupils can try it with a fork. Be sure that the fruit is well heated through, or it will spoil after being put into the jars.

Now that the jars and fruit are sterilized by boiling, the time has come to fill the jars with the fruit.

To Fill the Jars.

Remove sterilized jars from the water and place on a plate covered with a hot, wet cloth, so as to avoid all danger of the jar breaking.

Fill the jar with the boiling fruit until it overflows. If

it is large fruit, it should be put in with the spoon; if small fruit, put it in through a funnel. Run the blade of a silver knife around the outside of the fruit after it is in the jar; dip the rubber in the boiling water for a moment, and put in place around the top of the jar; then take the cover from the boiling water and screw on tightly.

Turn the whole thing upside down and let it stand on its head to cool. When it is cool, be sure that the cover is on so tight that no juice leaks from the can. Wipe off your jar with a damp cloth, and put it in a cool place until you are ready to use the fruit.

If the fruit has fermented when the time comes to use it, it will be for one of three reasons: the jar and the fruit were not perfectly sterilized; the jar was not air-tight; or the fruit was overripe.

Marmalade.

The dictionary says that marmalade "is a pulpy consistence made from various fruits." Marmalade is the pulp and the juice of fruit with sugar, while jelly is the juice and sugar without the pulp.

Preserves, marmalades, and jams are virtually the same, being the preservation of fruit in a strong sugar solution; but marmalade is usually made from the more acid and bitter fruits. Marmalade is less apt to spoil than canned fruits, because of the quantity of sugar used.

It is economy to put up marmalade when fruits are in season, for the expense at that time is comparatively slight, and later this preserve can be used on bread in place of butter; it is delicious in sandwiches, and adds much to a dinner if served with meat.

Receipts for marmalade are on page 224.

Jellies.

Jellies are made of cooked fruit-juice and sugar, there being an equal proportion of juice to the sugar.

Not all fruits can be made into jelly. There is a certain quality in fruit called pectose, and only when this is present will the fruit jellify. In overripe fruit this quality is lost. If the fruit and juice cook too long the power to make the juice firm is gone. Consequently, if you fail to obtain a firm jelly, it can be explained by one of these reasons: the fruit was too ripe or it was cooked too long. Sometimes, when fruits are picked directly after a rain, the juice will not harden into jelly. The best fruits for jelly are grapes, quinces, crab-apples, and currants.

Jelly-glasses.

These should be prepared in the same way as the jars were prepared for canning: sterilized by placing them in cold water and allowing this water to come to a boil, and boiling at least five minutes. After the jelly is poured into the glass, cover with paraffin. Paraffin may be bought by the cake, melted, and poured over the jelly. If the glass has not a tin cover, a piece of paper, cut round, and placed over the top, and pasted down over the edge of the glass, with mucilage, will do as well.

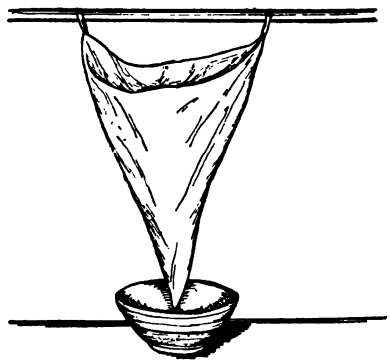


Fig. 1. Jelly-bag

Jelly-bag.

A jelly-bag is necessary to strain the juice

of the fruit from the pulp. To make this bag, take cheese-cloth, fold it double, then fold two opposite corners together; round the pointed end, and sew, making it the shape of a cornucopia. Bind the top with tape, and sew on two or three loops of tape by which to hang it.

Jelly receipts on page 225.

CHAPTER II

CITY REFUSE

Note to Teachers.

In "Practical Homemaking," the subject of the disposition of New York City's garbage, ashes and refuse is discussed in full. This chapter takes up a larger view of the street-cleaning problem; — and the final disposition of refuse is considered from a more scientific point of view.

The reason why school-girls need to be educated on this subject is because the thoughtlessness of citizens is keeping back this disease-prevention work. Look down any air-shaft, or in the alleys back of the tenement houses, and see the absolute disregard of the law which reads: "No person shall place ashes, rubbish, garbage, refuse or other matter in the yards, open areas or alleys connected with or appurtenant to any tenement house, except in suitable receptacles provided for the same." Until this law is known to every individual, and kept, the Street Cleaning Department and the Health Department combined cannot make a city healthy.

We have a contempt for persons who break such a law as "Thou shalt not steal"; we should also have a contempt for the housekeeper who breaks a law by throwing bundles of rubbish from the window.

Why is it difficult to make individuals do their part in this daily, municipal house-cleaning? Because so many lack the necessary imagination to take an interest in things out of sight. As soon as garbage or refuse is out of *her* house many a woman ceases to feel any responsibility for the harm it may do. Only education can create this interest, and only a social spirit can make men and women regard the work of the municipality as a personal obligation.

The material in this chapter should be studied before and while the pupils are working, for there is much actual work for the girls in the class to do in connection with the subject of the sanitary care and disposition of the city waste.

The teacher can ask the girls to get for her, from the Street Cleaning, the Health, and the Tenement departments of the city, the laws governing the care of all city waste. Each city has different laws, and they are free to any one.

Take up these laws, one by one, and see for yourself how many are kept and how many are broken, and whether it is the householder's or the city's fault if a law is broken.

An interesting way to do this will be for the entire class to walk around the block, each with a pencil and paper, making notes of what they see. Are the cans placed where they should be? Report on cleanliness of cans. Are they covered according to law? Is any law of cleanliness broken in connection with the yards, courts, passages, areas or alleys within the block on which the school stands? After walking over the ground carefully, and making notes, each girl should report to the teacher the condition of the street on which she lives, also, the condition of the sidewalks and the sewers.

Be sure before beginning this lesson that the laws relating to street cleaning and city waste are at hand.

The work in the house is to clean the water-closet, sink, and all pipes connected with them; also the garbage can. If it is necessary to refresh one's mind on this subject, review Plumbing-lesson, Chapter XIV, "Practical Homemaking."

Waste matter, enough to make a great river, flows down our pipes every day; it is the city's responsibility to care for this waste after it reaches the sewers; but it is our business to have it reach the sewers and to see to it that none of it remains in our pipes or in our house receptacles.

The following chapter should be studied before class by every pupil. Then the method of teaching will be to treat this chapter as a reading lesson in class; the teacher explaining any new words.

Care of City Refuse.

" The individual needs fresh air, pure water, good food, safe shelter, and should have a clean body, and something beautiful to look at."

When any person, desiring these healthy surroundings, becomes a part of a city, he must assume his share of obligation. Take, for example, the matter of the removal of waste.

We say, it is the business of the municipality to remove promptly all offensive and dangerous city refuse, but the burden is too heavy for any city department to carry alone; without the help of the individual it is impossible. A great deal is said of those diseases that could be prevented if the surroundings were cleaner. No city board alone can control this preventive work. The street cleaners are the doctors keeping down the death-rate, but until every person who desires health is willing to do his or her part, no number of doctors can prevent disease.

There are in New York City 6,500 men employed in keeping clean 1,359 miles of streets. The great majority of citizens are so absolutely uninterested in this work that day after day they not only do nothing to *help* make the city beautiful and healthy, but they actually *hinder* the men, whom they are taxed to pay to do the work.

If the refuse of New York City for one year were put into a pile it would fill the entire area of Bryant Park, or one large city block, and the pile would be 1,200 feet high, or nearly twice as high as the Singer building; and if the sewage of New York was collected into one stream it would make a continuous flowing river as large as the Hudson in summer. Surely, with a problem as great as is the disposition of this huge amount of waste matter, every man, woman and child must be trained to do his part; there must be no possibility for the excuse:

" I did not know the law," or " I did not know it was my business." Action is created through interest, and what we are interested in we take care of.

In studying the disposition of the city refuse, it is necessary constantly to keep in mind the two sides of the question,— the sanitary and the business side.

All city waste should be taken care of by the city, rather than by persons or companies. The municipal method is more systematic, more sanitary, cheaper for the people, and easier for the street cleaners. No city is in the first class where the municipality is not responsible for the disposition of its garbage and refuse.

City Refuse or Waste.

This is composed of

Sewage, or night soil.

Street sweepings — that is, the soot and air dust; the rubbish falling from refuse-cans; manure; pavement dirt; leaves; droppings from carts; bits of material from building construction.

Garbage — which includes animal and vegetable matter, and, in many cities, dead animals.

Ashes — including unburnt coal.

Rubbish — which consists of paper-boxes, rags, bedding, leather, rubber, metals, bottles and glass, paper-sweepings from houses, etc.

Snow.

Waste is matter whose present usefulness is over. It must be so taken care of as to do no harm, and must be changed or reduced into by-products as valuable as is consistent with the health of the community. Health is so closely allied with the disposition of waste that this side of the subject is of the greatest importance to every person.

The expense to a city of keeping its streets clean is so great that the matter of the by-products becomes very important. They must help to pay the cost of cleaning.

A by-product is a secondary product. It is something produced in addition to the principal product. As, for example, food is the principal product or use of animal or vegetable matter, but when that matter becomes garbage it may be turned into a *secondary* by-product, as grease.

Danger and Loss.

A short study of every kind of city waste will show clearly where the danger lies if this waste is not properly cared for, and the economical loss is not reduced to its maximum of value or its most marketable by-products.

First. Liquid waste or sewage.

Sewage is house sewage and street refuse and area drainage.

There is an average of one hundred gallons of sewage per person to be disposed of each day. The burden of caring for this falls on the city, and there is no profit to be derived from this liquid waste.

Inland communities must burn or bury the sewage; this is both costly and unsatisfactory. In cities situated near water, where the sewage can be carried into the rivers, ocean or lakes, the great danger is the pollution of the water.

In the last few years there has been much progress made in the purification of domestic sewage, which can be so disinfected and filtered that all danger is removed. Engineers, sanitarians and chemists are constantly working on the subject of the safe disposal of sewage,— but there is much municipal house-cleaning still to be done.

Second. Street sweepings.

Country-road dust is composed principally of ground-up rock, and is comparatively clean, because the country roads are but little used for travel. There is a natural fouling of the city streets which comes from the animal manure, wear from the pavements, soot, dust from the air, leaves, slobbering of animals. This dirt cannot be avoided; it can only be scientifically taken care of. There is also the unnatural, unnecessary dirt: sputum from human beings, scattered garbage, house-sweepings, and droppings from carts. The danger comes when this mixture, of natural and unnecessary filth, becomes pulverized by the action of traffic. In this condition it is mud or slime in wet weather, and dust in dry weather. The slimy mud sticks to the feet and clothing of the people, and in this way is carried into homes and stores; where it dries and mixes with the air, which, being filled with dust and disease germs, finds a lodgment in the lungs of the occupants. This is a constant danger. Man can do without food for three weeks; without water for three days; but he cannot do without air for three minutes. So it is safe to say that dust is the greatest enemy of man, not only when it contains actual disease germs, but because it is an irritant of the lungs. It also settles on and contaminates food.

Dust, in dry weather, requires neither clothing nor boots to carry it into our homes; it blows in through windows, doors and the smallest crack. Mud, out of doors, is less objectionable than dust, but mud in warm weather is simply a breeding-place for germs.

There are three methods of cleaning the streets. It should be remembered that it is not enough to remove layer-dirt; it is the mud and dust underneath that hold the disease germs.

Method 1 — Hand-sweeping.

Method 2 — Machine sweeping.

Method 3 — Flushing.

Sprinkling paved streets does not in any way clean them; it simply turns dust into mud, which soon dries and becomes dust again. It is believed by experts that if streets are properly cleaned, sprinkling will be unnecessary.

Disposition of Street Sweepings.

For the sake of the city's health, street sweepings, being dangerous, should be disposed of every day. They and night-soil are the only refuse which have no value, and are the most difficult of disposal. For example, it is not easy to burn street-dirt because the sweepings carry moisture and sand. This clogs furnaces, and adds virtually nothing to the heat. The animal manure is too often mixed with other rubbish to be of much value as a fertilizer.

In some places the street sweepings are disposed of in dumps, or are used to fill in roads, but this creates offensive odors, and the disease-laden material is blown into the air in the form of dust. In Columbus, Ohio, the sweepings are mixed with water and flushed down the sewers, and all danger is avoided. But a noxious deposit is formed at the sewer outlet, which must be cared for.

The care of the sewers is every person's responsibility. We have no right to take the time of our street-cleaners to work over a dammed-up sewer, clogged only because some one has thrown down sticks, stones or other solid material.

In 1911, the expense of cleaning the streets of New York was $6,329,850.06, apart from the expense of removing the snow, which was $2,470,950.47. It is estimated that if the people would not throw litter on the

streets or in the sewers, and would follow the laws regarding care of garbage, the cost of cleaning the streets would be reduced at least $400,000 a year. Other ways in which people can assist in keeping streets clean is to refrain from the filthy habit of spitting, and from shaking rugs and mats on the sidewalk or from the windows. Both are unlawful in many cities.

A desire for cleanliness is contagious. We can make it our habit to be clean, and others, almost unconsciously, will copy us. Each person should resolve that, "As an individual I will do nothing that will contribute to the disorder of the city streets, and wherever possible I will prevent others."

Is there anything more that the city can do to make the careless man and woman keep the street-cleaning laws?

The city can compel officials who have the power to arrest and *fine* all persons who will not keep the law. As it is at present, in almost all cases, this is a mere farce.

The municipality, also, can make the keeping of the law a possibility. For example, when it says "no person shall throw papers on the street," a receptacle, in which to throw the papers, should always be placed near-by.

The city's *third* waste, to be disposed of, is ashes. The ashes, which are dumped into the city ash-cans, contain much unburnt coal. This reclaimed coal has a heating value of fifty per cent. of new coal. The cost of obtaining this coal is collection and the labor of separating the coal from the ash. This combined labor is less than the fifty per cent. value. The fine ashes can be used to fill in low land, or ashes mixed with lime will make Portland cement. In certain combinations they make a common brick material; in other combinations, ashes are used to make ornamental tiles, and an artificial stone used for

sidewalks. In some communities, cesspool material and ashes together are used for fertilizing.

Fourth and Fifth. The city's largest refuse, Garbage and Rubbish.

As has been already stated, garbage means, simply, animal and vegetable waste matter that has served its usefulness as food.

Swill is another word for garbage. This word was used in Connecticut and Rhode Island, and is used to-day in some parts of Massachusetts. Slops was the word used for years in Philadelphia.

The reason why it is necessary to define exactly what is meant by these words is that the public may understand the laws, and, also, that the contractors, who often are licensed to collect and dispose of garbage, may know the exact material for which they are contracting.

A Few Laws about Garbage from Different Cities.

" Rain water, liquids, and dish-water must not be mixed with garbage." " Garbage must be kept in proper receptacles." " Wells, courts, passages, areas and alleys must be kept free from same." In some places, " Garbage-cans must be outside in summer and inside in winter." In one city, " Garbage-cans shall be placed two feet outside of lot line." In another, they " shall stand outside of street line."

These laws are for the householder, but a law that is made and not kept is worse than no law at all. There are three ways for the city to enforce garbage laws:

Educate the people.

Lord Derby has said, " sanitary instruction is even more important than sanitary legislation."

Fine those who will not keep the law.

Refuse to collect garbage if it is not placed according to the law.

The city of Washington and most other cities make it a crime for any person to disturb garbage after it has been put in the garbage receptacle. This is to prevent the turning over of garbage for the collection of possible junk, food, bones and fat.

Odors and Decay.

Garbage is subject to rapid decay, and as this decay takes place most objectionable odors are given forth. This is one reason why the collection of garbage is such an insistent part of the municipal house-cleaning, and why dumping and burning are offensive. Decay takes place more rapidly in warm weather than cold, and there is half as much more garbage in summer than there is in winter. When we consider the fruit-skins, pea-pods, melon-rinds and other vegetable coverings that are thrown out during the summer months, it is easy to account for this increase. While the odors from decaying garbage are most offensive they are not carriers of disease as is the dust from our streets.

Garbage Cans.

These are nearly always offensive, and how to keep them clean is a difficult matter. To disinfect these cans and to make laws that will insure their cleanliness have been the attempt of many cities and hundreds of individual experts; but the great size of the city's garbage-cans makes it impossible to force this labor on the women of the home. For example, in New York the cans must be large enough to contain the garbage for thirty-six hours; in Cleveland for forty-eight hours; in Yonkers

for three days; in Rochester the can must hold one gallon of garbage for every member of the family. The law in Philadelphia is, that no can shall be too large to be handled by one man. It has so far proved impracticable for the householder or the garbage collector to wash these cans. Therefore, in nearly all cities they are offensive in looks and odor. In Buffalo, from May 1 to October 30, there is a law that all cans must be thoroughly disinfected every day to the satisfaction of the Board of Health, when they are emptied. Watertight, covered receptacles are universally required, and this requirement may be easily enforced, but a garbage receptacle is really clean only when washed daily.

Final Disposition of Garbage.

In small places garbage is fed to swine, the farmers being willing to call for it on condition that it is kept separate from that which is not fit to eat. This method is not considered sanitary, because disease is spread by the pigs eating contaminated meat. Hogs so fed are apt to develop disease, and their feeding-places are dirty and offensive.

Dumping is still a method of disposal, but the dumps soon become unsanitary, a breeding-place for flies, and a gathering-place for the poor of the city who hope to find junk or food.

In still other towns garbage is buried. This method is expensive, as it requires much unused land. It is also a nuisance, for such a burying-place has to be near the city, and the avoidance of long hauls is one of the things to be considered in the disposition of garbage.

Garbage when carried out to sea and dumped in the water, floats back to shore. Dumping garbage at sea is an acknowledged failure.

There are but two scientific methods of disposing of garbage:

First: Reduction method, cooking the garbage into grease.

Second: Incineration, burning and destroying it.

One or the other of these methods is now employed in most of the large cities.

The general manner in disposing of waste by the reduction method is to cook the garbage into grease and sell the grease; the rubbish is sold separately.

Rubbish should be collected by the city, and the city, not the householder, should be held responsible. In Cleveland, Ohio, the rubbish is collected by workhouse prisoners; in Buffalo, the city contracts for the collection of ashes, rubbish, and garbage; in New York, it is collected by the Street Cleaning Department and sold to a contractor.

The principal rubbish from which we obtain by-products is:

Paper and rags. These may be sold to the paper-stock trade, and reappear in the form of paper boxes and common paper.

Tin cans. These are generally melted and molded into sash weights. The tin and the solder are often reclaimed. Cans are also melted and rolled out into sheets of tin from which buttons are punched out. These are used for nailing down building paper. The tin sheets are used also in fireproof and burglar-proof safes.

Bottles. The unbroken white glass bottles are usually sold back to the firm whose name is blown in the glass. Broken bottles and old glass are melted and reblown. Glass in combination is used in making artificial stone.

Empty Barrels. These are often returned to commission merchants to be used again for vegetables, etc.

Old Iron. This is used for low-grade castings.

Old Shoes. These are sold for burnishing and polishing castings.

Mattresses. The ticking of old mattresses is, unfortunately, often used to cover barrels. The hair is picked over and used again.

The grease made from garbage is the largest by-product. Dead animals, in some cities, are included with garbage, while in other places they are sold separately. Every part of an animal can be used as a by-product.

Reduction Plant.

A description of the plant used in New York is given in detail in "Practical Homemaking."

Columbus, Ohio, is said to have the best reduction plant. Its garbage collections are made by the city and disposed of at the city's plant. These collections are made in covered carts, with spring seats for the drivers. The horses are provided with good stables, the men with bathrooms and lockers.

The carts dump the garbage into steel cars which carry it to the reduction building. There the garbage is weighed in the car, which then turns over, dumping the contents upon a floor. In this floor are drains, and the water from the garbage drains into a gutter, from which it passes into a catch basin, thence into grease separating tanks, in order that any grease remaining may be freed from the water. The garbage is then shoveled into long troughs and conveyed to the top of the reduction building; thence it goes into big spouts, which discharge it directly into eight great digesters. Here it cooks from six to eight hours. It is then poured into receiving hoppers. From these hoppers this cooked mass passes into presses which press out the moisture and grease,

leaving a fiber, used as a fertilizer filler. The grease is then pumped into tanks, where it is separated from the remaining water. In Columbus, there are six of these tanks. The grease rises in the first and overflows into the second, and so on, until it reaches the sixth tank, when it is almost pure grease. Thence it passes to the drier, and the remaining water is evaporated.

After the grease has been taken off, what is left is a molasses-like compound called "stick," which is added to the fertilizer.

This by-product, grease, is very valuable. A certain contractor pays to New York, an average of $85,500 a year for its garbage, and that does not include the garbage from hotels or large restaurants, which is sold to private scavengers, at from $1,200 to $3,000 a year for each hotel; nor does it include dead animals, which in New York are disposed of by contract by the Board of Health.

Incineration.

This means destruction by burning.

An incinerator burns and destroys rubbish as well as garbage. This is the method approved by the medical profession, as it destroys all germs of disease.

There are four classes of waste to be disposed of under this method:

First — Wet Garbage, which has heat value. This includes dead animals.

Second — Refuse that is combustible, such as shoes, rubbers, bedding, paper, etc.

Third — Refuse that is not combustible, such as cans, iron, stones.

Fourth — Ashes, which have the heat value of unburnt coal.

Incinerator Plant.

Generally, an incinerator plant consists of from two to twelve furnaces. It is three stories in height, with a high chimney, which is necessary to induce sufficient draft. The raw material is received at the top of the building. Many incinerators have the refuse dumped on a moving platform. On each side of this stand " sorters " who pick out the non-combustible material as it passes, and this is later sold as a by-product. The refuse remaining is then mixed for burning. This mixing is necessary, as there must be at least twenty-five per cent. of dry material in order to insure combustion. This mixture of garbage, ashes, rubbish and dead animals is fed into the furnaces, from the rear, on to a grate where it is partly dried. It is then raked forward, where the heat, created by forced draft, passes over it, causing evaporation, and under it, causing combustion. After the refuse has been destroyed, the clinker (broken up with bars) falls through to the basement, and is raked into clinker cars. In nearly all incinerators coal, coke or shavings are added to help combustion.

The by-products, from this method of burning garbage, and rubbish, are:

First by-product — the heat formed into steam. In Minneapolis, steam is used to heat the poor-house, but coal, in addition to refuse, is used. This steam also drives the machinery and produces the electricity used in the street-cleaning plant.

In Frederiksburg, Denmark, the steam from the incinerators heats twenty-four blocks of hospital buildings, and, moreover, is sufficient for the washing, cooking and all disinfecting.

Second by-product — clinker. This combined with asphalt makes a dustless, sanitary paving. Building

blocks, slabs, brick and mortar are also made from clinker, in combination with other material.

Third by-product — dust. The dust left from combustion, when mixed with asphalt, makes a good filler. Five hundred tons of dust (which is a good yearly average for a large city) can be sold for about $1200.

One of the arguments for the reduction method as against incineration, is that burning is so difficult that only a part of the refuse is destroyed, which means that the remainder has to be dumped. To appreciate the difficulty of burning this wet material, one has only to think how hard it is to burn wet grass. It easily becomes a smouldering mass which cannot be stirred. But even when dumped the material is sterilized by the cooking.

Another reason against the practicability of incineration is that the principal by-product, steam, is too variable to be useful. In summer there is an excess of wet garbage and an equal decrease of ashes, with the half-burnt coal; consequently the steam cannot be relied on. On the other hand, an equal number of reasons are given why the incinerator is better than the reduction method.

Reduction plants, because of the odor, are usually built at a considerable distance from a city, and this necessitates long hauls. In Rochester, N. Y., however, the plant is in the center of the city.

The reduction-plant machinery is expensive to operate and to keep in repair; thus, but one furnace is built for each city, as against the many incinerator furnaces. It stands to reason that it would be a great calamity to a city to have this one plant destroyed or even seriously injured.

The one great claim for the incinerator over reduction is that all infected matter is destroyed and disease is

checked. The one great claim for reducing refuse, instead of burning it, is that the by-products, especially grease, are too valuable to be destroyed by burning when they can be sold for the benefit of the city.

Only scientists can decide these important questions, but surely every one of us, if we are intelligent in regard to so vital a matter, may be of some help.

CHAPTER III

LAUNDRY WORK

Note to Teachers.

It will be useless even to attempt to teach laundry work in fewer than five lessons. If a class, having an eighty-minute lesson once a week, can during one term, alternate baking- with laundry-lessons, such an intensive study of these two branches of homemaking will be more profitable than touching on many subjects and not knowing one sufficiently well to be able to practise it alone. What only can be done under the guidance of a teacher, is still a lesson to be learned. Give six weeks to laundry if possible.

Clothes Necessary for Learning Laundry Work.

It is not always practical to have soiled clothes brought from home by the pupils. Therefore, before beginning these lessons, see that the housekeeping center or school is provided with the following things:

Table linen	Embroidered centerpiece, Napkins, Doilies, Small tablecloth (not really necessary).
Bed linen	Sheets, Pillow-cases, Bedspread.
Towels	Hand towels, Bath towels, Wash cloths, Dish towels.

Underclothes may be represented by a doll's outfit. This outfit should be made by the pupils, as a part of the lesson,

"What the baby should wear." As a doll will be useful in many lessons, it is well to have a life-sized baby doll as a part of the necessary equipment of a Housekeeping center.

Doll's Clothes
- Two flannel bands,
- Two flannel shirts,
- Two flannel skirts,
- Two white skirts,
- Two dresses,
- Two night-slips,
- Two diapers,
- One coat, if possible.

One or two pairs of black stockings should be kept only for the washing-lesson.

For colored clothes, use the pupils' checked, cooking aprons.

To teach how to wash silk, a piece of silk may be kept for that purpose, or one of the girls' hair ribbons.

When the time comes to wash shirt-waists, one or more girls can bring waists, that need laundering, from home.

To arrange laundry-lessons so that each lesson for every class shall have a direct relation to the previous lesson, it will be necessary, so far as possible, to have many classes in laundry during the same week, one class leaving the work to be immediately carried on by the next class. An entire lesson should be given to a study of the equipment before actual laundry work is undertaken.

Laundry Equipment.

Before doing the first stroke of work a good workman is sure that he has at hand all the necessary tools and material for the performance of his particular task. This is true of every piece of work, if you would keep your mind and work orderly.

In *this* task, first, be sure that you have time enough; hurried work is usually poor work.

Second, see that the place you have to work in is the best at your command. A light, airy basement is the ideal laundry; but the majority of women must use the

kitchen. If the kitchen is also the laundry, great care must be taken that the soiled clothes (many of them underclothes) are not about at the time the food is cooking. On wash-day very simple food should be served and as much of this as possible cooked the day before. This is the cleanest, easiest, and most orderly way.

As the stove will be needed for the clothes-boiler and irons, there will be but little space for pots and pans.

Stove.

In some homes, where space and money are plentiful, there are laundry stoves separate from cooking stoves. Such a stove is never blackened, because the irons must be kept absolutely clean; it is rubbed clean with a dry brush.

In the majority of homes the cooking-stove is used for irons. Therefore, be very careful that on ironing-days, especially, the stove is rubbed as free from blacking as is possible.

Tubs.

Porcelain or soapstone tubs are the best; wooden tubs absorb odors.

The most perfect stationary tubs are set away from the wall, but these are seldom found in any apartment. When the tubs are built against the wall it means more care for the housewife, when they are not in use, to keep dry every crack and edge and hidden crevice.

If galvanized tubs are used, be careful that they do not rust. Dry well and occasionally oil.

In the country, portable wooden tubs are used; if they are allowed to become too dry, between washings, they will fall apart. When in use such tubs are placed on a bench, which should be about thirty-six inches high. The

advantage of portable tubs in the country is, that it is possible to wash out of doors, and fresh air and sunlight sweeten the clothes.

Stoves and tubs are what are called stationary equipment and are usually put in by the landlord; but every woman or girl is responsible for their condition when wash-day comes. It is only a bad housekeeper who uses her tubs for a storing-place between washings, or who, when she lifts the cover, finds cockroaches because of the damp condition of the tubs.

Movable Equipment.

If the laundress is the right kind of laundress, she will see that all equipment necessary for washing and ironing is on hand and in good repair before wash-day comes.

In a small kitchen many things, that we have for every-day use, may be utilized in our laundry work, thus avoiding too many things about.

Rubbing-Board.

There are three kinds:

Glass. Which is most easily cared for, and wears longest.

Zinc.

Wood. Which is the least desirable.

Wringer.

This is not a necessity, but helps to make easier the wringing of clothes. It is more economical to buy a wringer of good quality, even if more expensive. A good wringer requires very careful treatment. To keep the rubber-rollers clean, it is very necessary after each washing, to unroll them and wipe them dry. A very

good housekeeper will have a slip bag to keep her rollers in.

Boiler.

An oblong boiler is more practical than a round one; it holds more clothes and fits better on the stove.

A copper boiler will outlast all others, but it is expensive.

A tin boiler, with copper bottom, is a very practical boiler to buy.

An all-tin boiler is cheap but it does not last.

Any boiler must be carefully dried after each washing.

Clothes-Stick.

An old broom-handle is as good a stick as any other to take clothes from the boiler.

Pail. To carry water.

Dipper. The house dipper will answer.

Agate pan. This is for starching; the dish-pan will answer.

Saucepan. To make the starch in.

Tea-kettle. Be sure it is absolutely clean.

Three Brushes.

One for scrubbing the wood-work of board, tubs, etc.

One for removing very soiled spots from clothes.

One when it is necessary to use cleaning fluids.

Wooden spoon. For starch.

Strainer. For starch.

Clothes-basket. Large wicker basket is easily handled.

Clothes-horse or towel-rack.

Clothes-line and clothes-pins.

Get a good clothes-line, it lasts longer; a poor line is not safe. Take the clothes-line down every time it is used. Wipe with damp cloth before using. Metal lines rust easily.

Clothes-bag for pins. Have this of pretty cretonne, and make it an attractive addition to the kitchen.

Duster for clothes-line. Any clean duster will answer.

A clean cloth for wiping tubs, boiler, etc.

Small piece of clean cloth, always at hand to rub off any spots.

Equipment for Ironing.

Ironing-table or board. It should be covered with canton flannel or a coarse blanket, and cotton cloth pinned tightly over this. A drawer in an ironing-table is a great convenience.

Irons. There are many kinds of irons: gas, electric, which are expensive.

Nickel-plated. These do not rust.

Iron ones are the most common and many a laundress will use no other kind. These must be of different sizes. They must be kept smooth. When not in use keep in a dry, clean place. Wash, and heat irons before using.

Iron-holders. Do not use any old rag for an iron-holder, but take time to make three or four of suitable material.

Iron-stand. A tin cover may be used for this.

Wax. To prevent irons from sticking.

Heavy paper and cloth. To try the irons on; never try them on the board.

Materials Used in Laundry Work.

Soap. Kirkman's, or a soap containing little resin.

Ammonia. Mild.

Borax. For removing stains and softening water.
Sal-soda. For cleaning the tubs and pipes.
Wax. Beeswax or old candles; for waxing irons.
Salt. Used for smoothing irons; also for stains.
White vinegar. Sets color.
Alcohol. For stains.
Sandpaper. For smoothing irons.
Bluing.
Starch.

There are many liquids for removing stains, such as Javelle water, ether, etc., but any girl who is not a trained laundress cannot be trusted with these things; when not used properly they spoil the clothes.

We will take it for granted now that every girl who has reached this point in this chapter has a personal knowledge and an intimate acquaintance with every article mentioned above. As in cooking, let us know our tools first.

Many clever mothers have found substitutes for various articles of laundry equipment that may for some reason be missing. It will be interesting to hear from any member of the class of any substitution that has taken place in her home.

The division of laundry work into these five lessons is only one way of doing the work. Any teacher should feel perfectly free to divide the work in any other way which seems to her more practicable.

LESSON I

Body Clothes.

Clothes which are worn absorb waste matter thrown off from the body in the form of perspiration, and in bits of dead skin which are being constantly rubbed off.

The food that we eat repairs this waste. Our underclothing, because of this waste matter, becomes damp, sticky, and oily. This condition is unhealthy, for the proper absorption and evaporation of moisture from the body is prevented. Unclean clothes increase the heat of the body in summer and make it colder in winter. A bath every day, winter and summer, followed by clean clothes at least once a week in winter and much oftener in summer, will do much to prevent discomfort and illness. In the case of small children clean clothes will often stop their fretting, which indicates irritation.

As every girl knows, dirt comes also from the outside and must be removed, if for no other reason, because dirt indicates the possible presence of disease germs.

Sorting the Clothes.

Sorting is the separation of clothes, before washing, into the divisions in which they are to be washed.

Table linen,	Towels,
Bed linen,	Flannels,
Underclothes,	Stockings,
Handerkerchiefs,	Print or colored dresses.

As the pupils sort the clothes, and before beginning the actual washing, it will make the labor much more interesting to know something of the materials that are to be washed. This was found true in the garbage lesson; every girl knowing all about the disposition of garbage found it much more interesting to take her place and do her work well, as one of the laborers in a great industry. If she failed to care for the ashes, garbage and refuse, she felt herself a poor workman in a big business. The care of the stove was more interesting work after study-

ing about coal. Take the following as a reading lesson:

Linen.

Linen is not so good for many things as cotton; it wrinkles easily and is much more expensive. For the table it is the best material to use, for its smooth, brilliant texture adds to the beauty of the table; it looks fresh and clean and when properly laundered lasts well.

Linen is woven from flax. Flax is a plant which grows from two to three feet high, bears small leaves and blue flowers. When the seeds of flax begin to ripen the plant is pulled up by the roots. Then follows a process called "rippling" by which the seeds are taken from the plant, which is then steeped in water to produce fermentation and to separate the fiber. Then "scutching," which is to remove all woody particles; then a process called "heckling" by which the fiber is combed out, straightened, and the longer threads separated from the woolly mass.

Making linen of flax is but one of its many uses. The seed is very nutritive; linseed oil, which is made from the seed, is a great industry. Flax used to be raised on individual farms, and the women of the family took the flax after the heckling and with their own hands did the spinning, weaving, bleaching, and finishing.

The cultivation of cotton did much to lessen the necessity for linen, and the introduction of machinery did away with flax-growing and weaving as an individual farm industry; even the dragging up the flax by the roots is all done now by machinery. Hand-linen looms are not used to-day, and many families were ruined when the machinery for making linen was introduced, as their hand-looms were their only wealth.

In speaking of the process of spinning and weaving

linen, you will notice that "finishing" is the last step. It is in this finishing that the linen manufacturers are able to deceive the public. This finishing or sizing is the gloss on the linen; it is often simply starch ironed in, and polished hard. The starch will wash out with the first laundering. When you buy linen the way to test good from bad is to rub a piece of it between the fingers; if it is thickened with starch instead of being really heavy linen, the starch will come off on your fingers; also after you have rubbed a little of the starch out the linen will have a thin look, while good linen will stand rubbing, not losing its firm appearance.

Cotton Cloth.

Underclothes nearly always are made of cotton cloth, so also is what we call "bed-linen." This expression comes from the old times when sheets and pillow-cases were always made of linen. Linen is too expensive now to be generally used for sheets.

Cotton is now our chief vegetable fiber. At least six billion pounds a year are produced, and the United States raised three-fourths of this.

Cotton is the white downy covering of the cotton-plant, and the value of the cotton depends upon the evenness and strength of the fiber. In cheap cotton the fiber is about an inch long; when the fiber is two inches long the cotton is very good. Long fiber cotton is used for fine cotton laces, fine lawn, and muslin goods, while the short fiber cotton is made into inexpensive cloth. One reason why cotton is cheap is that there is only five per cent. loss in preparing it for use.

There is not time in a book like this to make a study of the manufacture of cotton, but every woman and girl must know good cotton cloth from a poor quality. It is

true in cotton, as in linen, that the finish or sizing is deceptive. This, too, can be put on with starch which, when washed out, leaves the clothes loosely woven and flimsy. Rub it, and feel it with your fingers and you will soon be able to judge the quality of the cloth.

Do not blame the woman behind the counter if you find that you have bought a nightgown, for example, that is useless after a few washings. The saleswoman does not make the goods, and does not set the price; very likely she herself has no knowledge of cottons. She is paid to make you buy the nightgown.

It is well to remember a few good rules about ready-made cotton underclothes. If an article is cheaper than the market price there is usually some reason for it; if it is being sold at a marked-down sale it is worth while to examine it very carefully. After you have rubbed it in your fingers if it feels thin and loosely woven do not buy it, no matter how tempting the bargain. If one gets good cloth and good work one has to pay for them.

Colored Cotton Cloth.

Gingham is made of yarn which is dyed before it is woven into cloth. Cretonne, chintz, and calico are made into cloth and then stamped.

Outing cloth, which is an imitation of wool, is soft and light and made of cotton. It does not shrink like wool, and the best grades do not fade.

Flannels.

Flannel, which is all wool, is made from the soft, hairy covering of sheep and goats. The wool of the llama of South Africa is also used in making stuffs for women's wear. Sheep-raising was a business long before agriculture was known; in fact so long ago that no one knows

when man first realized that the wool of sheep was valuable. As soon as wool began to be used for cloth the sheep-raiser saw the need of improving the fleece. This was done by careful breeding, careful feeding, and by protecting the wool-bearing animals in bad weather; in other words, the more domestic a sheep is the softer and finer the wool. Much of the wool used in this country comes from Australia, South America, and South Africa.

The wools used for blankets and carpets come from a lower quality of sheep, where the hair is harder and coarser.

Cashmere wool is the most costly of all wools, and comes from the cashmere goat in the Himalaya Mountains.

In old times, wool manufacture was a home industry, just as linen was. The beautiful hand-spinning and weaving done then have not been excelled to this day. The first wool machine in this country was in Pittsfield, Massachusetts, in 1790.

Manufacture of Woolens and Worsteds.

First, the wool is washed, and the sheep is then sheared; then the wool is beaten to get rid of dust and other impurities, then washed again. This second washing, after the wool is taken from the sheep, is not only needed to remove dirt but a fatty secretion, called "yolk." Wool is washed in a soapy solution, often with soda added; and is passed from one tub to another until it comes from the last tub comparatively clean; it is then dried, bleached, or dyed. Even after all this, the wool has a matted appearance, and contains some dust and sand. The process of removing this is called "willowing," and is done by a machine that gently tears the matted locks apart, and frees the wool of all impurities.

AFTER THE SHEETS HAVE BEEN LAUNDERED

" Mixing " comes next, and is a process whereby wools of different quality are mixed together. If other material, such as silk or cotton, is to be blended with the wool, it is done at this time.

Oiling. The wool, after its many washings, is hard and wiry, and in order to restore its natural softness it is slightly oiled while it is being mixed. Up to this point worsteds and woolens go through the same process; after this the work is different: worsted thread is combed and the thread twisted until it becomes hard. Woolen yarn, from which woolen goods are made, is simply carded and loosely spun.

Carding. This process produces a thread whose fibers lie loosely, projecting from the main thread in little ends which form the nap of the cloth.

Spinning is the art of drawing and twisting this fiber so that it is formed into continuous threads, ready for weaving or knitting.

Weaving. This is the art of making thread into cloth.

Stains.

As a good laundress sorts her clothes she will look for stains. Any garment or article having a stain on it should be laid aside, for if put into hot soapy water it will set the stain and make it difficult to remove.

Blood Stains. Wash in cold water, then rub with naphtha soap, and soak in warm water. If the stain remains apply a paste of raw starch.

Chocolate or Tea. Sprinkle with borax, and soak in cold water; then, when put in the boiling wash water the stain will come out.

Coffee, Fruit. Lay the stained part over a bowl and pour boiling water on it; have the water come from a height so as to give it force.

Glue. Vinegar rubbed on with a cloth will remove glue.

Grass Stains. Warm water and naphtha soap should take out grass stain. If white goods ammonia may be added.

Grease. Warm water and soap; if that fails wash in gasoline.

Ink. Let the stained part stand in milk, and when the milk is discolored change it to fresh milk. Wash next in cold water, and lastly wash in warm water with a little ammonia, if the goods are white.

Kerosene. Use fuller's earth made into a paste, and let this remain on the stain for twenty-four hours.

Machine Oil. Wash first with soap and cold water, and then rub with turpentine if the stain is not removed.

Mildew. Usually it is our own fault if the clothes are mildewed; they have been neglected and left damp in a close place. If they should become mildewed, squeeze lemon juice on the stain, and lay it in the sunlight. If this does not remove the stain, make a paste of soap, starch, lemon and salt, and let this paste stand on the spot for twenty-four hours.

Milk. If on a colored dress, wash with cold water.

Paint. Use benzine or turpentine.

Perspiration. Soap-suds and sunshine.

Scorch. Rub the scorched article with lemon and put in the sun.

Stove Polish. Naphtha soap and cold water.

Wagon Grease. Rub with lard and then wash with warm water and soap.

Wax. Place brown paper over grease spot and press paper with warm iron.

Wine. Put a layer of salt on the stain; then pour boiling water over the spot, as in fruit stains.

The next step after sorting clothes and looking for stains is to

Soak Clothes. This is done to loosen the dirt so that the garment will require less rubbing when washed. Add a little soap to the water in which clothes are soaked. The cleaner articles, stockings, and colored clothes, are not soaked.

LESSON II

When the pupils come into class they should find the clothes soaking.

This lesson will represent the morning after the clothes have been soaked overnight.

First, wring out the clothes. Wash the tubs and fill nearly full of hot water. Fill the boiler half full of cold water and add enough dissolved soap to make a light suds. Put a coarse, clean cloth in bottom of the boiler, to prevent scorching of clothes. You are now ready to wash, not to talk about it, but to do the actual work.

In clothes, as in dishes, the cleanest are washed first.

Table and Bed Linen.

Put these in one tub of hot water; use soap freely. As each piece is washed wring it with the hands and drop it in the next tub of water. When all of this first lot are in the second tub, wash again with soap, as before; as each piece is washed and wrung from this tub, drop it in the boiler of cold water. When the boiler is full light the fire, if it is a gas stove; pull it over the hot fire, if it is a coal stove. Press the clothes down with a wooden stick, which is also necessary to turn the clothes and take them from the boiler.

While the first tubful of clothes is scalding in the boiler,

rub out the second tubful of underclothes, which are the next cleanest, in the same manner.

When the second lot is ready for the boiler, the first should have finished boiling and be ready to take out. Put these in a tub of clear water. Wash the third lot, which will be the very soiled clothes and towels, while the second lot is in the boiler. Take the second lot from the boiling water and put them in the tub with first clothes, and then put third washing in the boiler. It is now time to rinse the first and second clothes. First, wash out and thoroughly clean the tubs that have been used in washing, as they are to be used for the rinsing. Fill both tubs with clear hot water; rinse and wring from one tub into the other, then wring out into bluing water. The last boiler of clothes should be rinsed in the same way and blued. As the clothes are wrung out from the bluing water separate those that require starching.

Bluing Water.

Use clean cold water, and have the bluing ball tied in a cloth, to prevent specks coming on the clothes. Never allow the clothes to stand in this water, as they will become streaked, and never, for the same reason, allow them to rest on the bottom of the tub.

Hanging.

Be sure the lines are clean and tight. Every time they are used they must be wiped with a clean, damp cloth. See that the clothes-pins are clean and not broken. Hang clothes of a kind together, and hang white clothes in the sunlight, if possible. All articles should be hung on the wrong side. Hang the sheets out first, as they take the longest time to dry. In hanging fine pieces, and the un-

derclothes, be careful that the clothes-pins do not tear the garments.

Starched clothes must be left for the next lesson.

LESSON III

Starched Clothes.

Bed linen, towels, table linen and handkerchiefs should never be starched. People differ about underclothes. Many care for no starch, while others wish a little, realizing that garments iron more easily when starched, and keep clean longer.

To Make Starch.

Thick starch.

Half cup of starch,
Half cup of cold water,
One quart of boiling water,
One quarter teaspoonful of lard or wax,
One teaspoonful of borax.

Mix the starch with cold water, and make smooth; slowly add lard, borax, and boiling water. Allow the starch to cook about fifteen minutes, and then strain. Use the starch hot. Borax gives stiffness, gloss, and whiteness to clothes; wax keeps irons from sticking.

Thin starch is made in the same way, except that three quarts of hot water, instead of one quart, are added. Wring out in hot starch while they are still wet. Hang them out of the wind to dry; wind blows the starch from the clothes.

Raw starch.

Two tablespoonfuls of starch,
One half teaspoonful of borax,
Two cups of cold water.

Dissolve the borax in a little hot water; mix starch with cold water and add this to the borax. This is used for starching shirts and collars and cuffs.

When cold water is used, the articles to be starched must be thoroughly dry before starching. As each article is starched, squeeze it and roll it in a towel for an hour before ironing.

Woolens and Flannels.

As these require great care to prevent them from shrinking, it is well to do them on a separate day from the regular washing. All woolen material should be washed in lukewarm water, and rinsed in water of the same temperature. In the first water use a soap solution; never rub soap on the garment. If woolen garments are not thoroughly rinsed, so that no soap remains, they will not be soft. When washing, do not rub flannels more than is necessary, as rubbing hardens and thickens them. Use borax and ammonia if the water is hard. Dry flannels in the sun or in the air; never near a hot stove. Squeeze dry, and shake well, before hanging. Hang wrong side out. Never let flannels freeze because it shrinks them. White clothes are not injured by freezing. It is well to bring flannels indoors before perfectly dry; roll them in clean cloths and iron as soon as possible.

Blue flannel will keep its color better if a tablespoonful of vinegar is added to the rinsing water.

White flannels are blued, as are other white clothes, but great care must be taken to have the water of the same temperature as the washing- and rinsing-waters.

Good Things to Remember about Flannels.

First. Don't allow them to get very soiled before washing, as rubbing hard injures them.

Second. Wash in lukewarm water, one piece at a time.

Third. Do not soak flannels, as it hardens them; do not boil, as it shrinks them; wash quickly.

Fourth. Rinsing- and bluing-waters should be of the same temperature as the washing- and boiling-waters.

Fifth. Shake flannels before washing and shake them after washing, before hanging.

Blankets.

Select a clear, windy day in which to wash blankets. Fill two tubs with lukewarm water; pour a soap solution into one tub and a weak soda solution into the other.

Dissolve three tablespoonfuls of borax in a quart of water and divide this between the two tubs.

Shake the blankets; then put one pair into the first tub, sop it up and down until the dirt seems out of it; squeeze water out and put in the next tub; sop up and down as before. Now rinse the blankets very thoroughly in water of the same temperature as the washing water. Run the blankets through a wringer, if you have one. Shake hard before hanging up to dry. Hang, by firmly pinning in many places, so that no great strain may come on any one part of the blanket.

If there are any soiled spots on the blanket spread it on a board and rub with a brush; rubbing with the hands twists the fiber. Have fresh water for each pair of blankets. Be sure that the blankets are perfectly dry before they are taken from the line; brush with a soft brush after drying. Fold and place between sheets with a heavy weight on the top; this is better than ironing.

Colored Clothes.

To set the color in clothes before washing: rinse the colored garments in one gallon of water to which has been

added, either, one tablespoonful of salt or one quarter cup of vinegar. Colored clothes should never be soaked. Do not use much soap in washing; do not have the water hot, only warm; do not use strong, yellow soap or washing-powder or ammonia; do not rub any soap on the garment but wash in suds. Colored clothes must not be boiled or blued. Dry quickly and dry in the shade.

If a pupil will remember all of the " don'ts " connected with the washing of colored clothes, she may be trusted to wash them as she would white clothes.

To Wash Silks.

Make warm, soapy water of ivory soap. Rub article to be washed as little as possible; squeeze the dirt out so as not to hurt the weave. Do not use ammonia on white silk; it makes it yellow. One teaspoonful of borax dissolved in a pint of boiling water softens the water. This is sufficient for two tubs of water and should be added to the soapy water. Rinse in two waters; wring as gently as possible, and hang out to dry. When half dry, take in, roll tightly in clean cloth, towel or sheet; let it stand thus for an hour and then press.

Ribbons are washed by spreading them on a clean board, scrubbing them with a soft brush, rinsing well and pressing the same as silk. Do not use too hot an iron on silk; it makes it stiff.

Stockings.

Great care should be given to the washing of stockings. Every girl, who studied the first book in this course, knows that clean, fresh stockings mean warmer feet in winter and cooler feet in summer. Stockings half washed are not " clean " stockings.

Stockings should be first washed on the right side and

then turned and washed on the wrong side. Never rinse stockings in water that has been used for other clothes, as it contains lint. It is well to rinse new stockings in salt water to set the color.

Silk stockings are washed like other silk goods.

Woolen stockings are washed the same as flannels.

Cleaning of Tubs.

This is the last task connected with washing, and is most important. First, the tubs should be scrubbed to remove the grease and scum. Lint from the clothes is very bad for the pipes; therefore, they should be flushed with soda water after every washing. If the water runs slowly down the pipes, even after using soda, pour down potash with boiling water.

Dry the tubs, and the woodwork all about them. Do not use tubs for soiled clothes between washings.

It will be necessary for every pupil to apply herself very closely if she learns how to wash clothes in these three lessons.

LESSONS IV AND V

Ironing.

It is not possible to learn ironing in two lessons; for a knowledge of this art comes only with practice. Ironing is like cooking; all that the school can do is to start a pupil in the right way. As was taught in the very beginning of the laundry lessons, do not begin to iron until everything for the purpose is at hand. Go over once more these necessary things.

Ironing table or board,	Cloth and paper for trying irons,
Flat-irons,	Wax,
Iron holders,	Sandpaper,

Iron stand, Bowl and cloth for redampening dry spots.

First, be sure the work of covering the ironing-board is understood. Every girl should be able to cover an ironing-board so that it will be smooth and tight.

To obtain good results, clothes must be well dampened. Spread each article out on a clean cloth and sprinkle one piece at a time. This is done with the hand or a clean whisk-broom, that is used for nothing else. Then roll the clothes, turning in the edges as you roll.

Plain articles, such as towels, napkins, handkerchiefs, may be rolled together. After sprinkling and rolling it is a good thing to let them stand several hours before ironing. Starched clothes need to be damper than those that are not starched, excepting cold water starch.

There are always some clothes that do not require ironing, such as knitted underwear, woolens and stockings. It is only necessary to smooth these out well and fold carefully; they are fresher if not ironed.

Be very sure that the irons are clean before heating. Place the articles needed for the ironing on the ironing-board, at the right. Iron the coarser things first, as the irons become smoother the longer they are used.

First towels, then napkins, table doilies, sheets and pillow-cases, and handkerchiefs.

Be careful that the hems are properly ironed and the edges even — edge to edge. If there is embroidery on the articles iron this first and on the wrong side.

Fold hems of sheets together and fold wrong side out. Iron table-linen on the right side. Iron all pieces until dry, that is, until all steam stops rising.

Underclothes.

If embroidered, iron as directed. Then the sleeves, the yoke, and lastly the body of the garment. Iron over as

large a space at one time as possible, and do the work rapidly, or the garment will dry.

Skirts.

The ruffle is ironed first, then the band, and lastly the body of the skirt.

Any garment with folds and seams should hang for a while before being folded; it is difficult to get the seams perfectly dry with the iron. Starched clothes require a very hot iron.

Remember the appearance of napkins and handkerchiefs depends upon the way they are folded. Fold all napkins in the same way so they will look the same on the table.

Place a Turkish towel under any embroidered article; this will make the embroidery stand out.

Never allow irons, when not in use, to stand on the stove; they lose their temper, and are not able to hold the heat.

CHAPTER IV

BAKING LESSONS

Note to Teacher.

The art of baking cannot be mastered quickly. No pupil can get an understanding of it in fewer than five lessons, and even then she will not have gone far; she must practise by herself at home if she wants to know it thoroughly. If a girl is not enthusiastic enough to work out baking receipts out of school, these few lessons in school will prove useless.

Suggestion for Plan of Work.

Taking it for granted that each class has one lesson a week, make every other lesson for ten weeks a baking lesson, in the following order:

Baked Meats, one week
Baked Puddings, one week
Baked Cheese and Vegetable dishes, one week
Muffins, Corn Bread and Baking Powder Biscuit, one week
Cookies and Cake, one week.

This is a very short time to allow for learning to bake, and the author urges, if possible, that more lessons be given on this subject.

The contents of this chapter can be studied during the weeks of baking.

Cooking in General.

There are four reasons for cooking food:

1. To bring out new flavors.
2. To please our taste.

3. Because cooked foods are usually more digestible than raw foods.

4. To destroy harmful microbes.

Cooking consists in applying heat to raw food. There are many methods of cooking; the most common ways are:

Boiling. That is, cooking food in boiling water, the food being covered by the water.

Stewing. That is, boiling food in a small amount of liquid.

Broiling. Cooking food directly over a fire or in front of a fire.

Roasting. That is, cooking meats, or fish, in an oven, allowing the juices to be drawn out into the roasting pan, and basting, or moistening, the roast with these juices.

Frying. Cooking food in hot fat.

Baking. Cooking in an oven by heated air.

Frying is a very common method of cooking, because it is the easiest and the quickest. It is the least healthful method. In frying, the food absorbs the hot fat, and hot fat is very irritating to the stomach, unless it has been subjected to long and slow cooking, as in the case of baked cakes, cookies, muffins, etc. Even with these it is better, before eating, to allow the fat in them to cool. A muffin is more digestible cold than fresh from the oven. The reason for this is that fat which has been heated and then cooled is more granular; the water has been driven off in steam, the fat becomes brittle, and thus is more easily broken up in the stomach.

Baking is a healthful way of cooking food. In baking, the heat of the oven expands the air or gas in the food, the water in it turns to steam, and a part of this water is evaporated while a part remains in the food. It is the steam from the food and the expansion of the gases that

work the physical changes in the raw materials that have been mixed together.

The physical changes consist in a blending of all the materials that make up the food. No substance is lost, but some of the substances are changed. For example, in a cake, after it is baked the sugar is still sugar; the starch is still starch, and the fat is still all there; but the materials have been blended together, and as this blending takes place new flavors are developed. A proportion of the starch and sugar in the crust will change to what is called caramel. (In the back of this book is a receipt for caramel sauce, and any girl can see for herself how the flavor of sugar is changed by cooking.) (Page 214.)

In the back of this book are receipts for baking cake, muffins, corn bread and biscuits, baked meats, baked puddings and baked vegetable and cheese dishes.

Let us take it for granted that there are to be at least five lessons in school from these baking receipts, and that all the remaining baking receipts for which there is not time in class will be tried by the pupils at home.

The first thing to be sure of in baking is that you perfectly understand your oven, and that it is in the best condition for baking. A freshly made fire is apt to give a hotter oven than one that has been burning for many hours; but a fresh fire is by no means always possible. Therefore, have your fire as free from clinkers and ashes as you can, and have the coals red.

For a hot oven, close the damper, open the draft, and be sure that the check is closed tight.

There are two ways to test an oven:

1. Place a piece of clean white paper in the oven and time with the clock. If the paper burns in five minutes, the oven is a "hot oven." If the paper takes eight minutes to brown, the oven is a "moderate oven."

2. An easier test is to hold the hand in the oven and count. Your hand will feel very hot in six counts in a "hot oven." You can count eight before it will feel very hot in a "moderate oven."

Keep the inside of the oven clean; do not think that because no one sees it you can neglect this necessary cleaning.

Doughs or batters, containing a large proportion of eggs, should be cooked in a moderate oven to prevent toughening. Any pupil can see why this is so if she will boil an egg rapidly and then boil one slowly; the first egg will be tough.

In baking doughs, the larger the mass, the lower must be the temperature of the oven. This is so that the heat may have time to penetrate to the middle of the dough, and expand the gas and harden the albumen and gluten before the crust forms around it. If you are baking a cake, for instance, and the crust forms before expansion has taken place, the cake will be heavy.

An oven which has in it food that is giving off much moisture, or water vapor — corn cake, for example — requires more heat. If, at one time, there are several dishes in the oven all throwing off steam, the oven should be hotter than if those dishes are to be cooked in it separately.

No brown crust can be formed in baking until the water from the surface has nearly all evaporated.

Remember that every time you open the oven door to look at what is baking, you allow cold air to enter the oven. On the other hand, don't think for one moment that when the dough is in the oven you can forget it. It is your responsibility every minute until it is thoroughly cooked.

If the cake is put on the lower shelf of the oven, the

greater heat will reach it from the bottom, and the cake will cook more slowly (giving the gases time to expand) than if the cake was first put on the top shelf, where the heat would come on the top of the cake, making a hard crust before the dough was heated through.

All of these points in regard to the oven have to be known before the mixing and the baking begin, because after the mixture is put together, as little time as possible should pass before it is in the oven and the door is shut. There is no time to study the oven after the batter is mixed.

Getting Ready for Baking.

Cover the kitchen table with paper.

Collect all the utensils and materials that will be used.

Before you begin work be sure that teaspoon, tablespoon, measuring cup, utensil plate, materials to be mixed, bowls for mixing, flour sifter, baking pans, even paper for buttering pans, are on the table. Every good cook will use such forethought in getting ready so that after she has once begun to combine the food materials she will not have to leave the table until she is ready to put the batter into the oven.

There are good cooks and bad cooks, and to be a poor cook takes just as much time as to be a good one. The thing that makes a good cook is a thorough interest in cooking. Cookery is an art; and to succeed in it, you must, while working, give it your whole attention, your common sense, your muscle, and your taste. When a girl is a trained cook, she can use her own judgment.

Doughs.

Doughs are made light and porous in the following way:

KITCHEN WORK AFTER BAKING LESSON

1. When baking-powder unites with moisture, the gas in the baking-powder is set free. To test this, put dry baking-powder in a spoon, drop a little water on it, and at once you will see bubbles of gas. It is this gas in dough that makes it light.

2. Gas is produced by yeast. Yeasts are very minute plants. These tiny plants, when they come in contact with sugar, so break it up as to produce from it carbonic acid gas and alcohol. This process is called fermentation. The use of yeast is simply to manufacture the gas from the sugar that is in the dough.

3. Doughs are also made light by beaten eggs. The whites of eggs, especially, can be expanded by beating air into them. Then, when the egg is added to the dough, the air is also added. Batter without eggs can be beaten so hard that air is beaten into the batter. When eggs are used as leavening agents, the whites are beaten separately, as they will expand much more when they are separate from the yolks. The whites are folded into the mixture last of all, and a good cook will be careful to break as few air cells as possible.

4. Soda in combination with an acid such as sour milk or molasses liberates a gas that makes the dough light.

5. The expansion of water into steam, as the heat enters the dough in the oven, also lightens the dough.

All material used for leavening must be kept cold, as cold air expands more on being heated than warm air.

General Rules for Mixing Dough and Batter.

Two cups of flour require about 4 teaspoons of baking powder. But batter and muffin mixtures require more baking powder to the amount of flour than soft dough.

When eggs are added, there should be one less teaspoon of baking powder for each egg.

Fats are added to a dough or batter mixture to make it brittle. This is called shortening, and greatly enriches the dough. Fat should be cold when added to pastry, but melted when mixed with batter.

Food that is served cold needs more sweetening than food that is to be eaten hot; because warm food tastes sweeter than cold.

To Test any Batter.

A cake or corn bread or any soft batter is ready to be taken from the oven when a toothpick (keep a number for this purpose; do not use a straw from the dirty broom) can be inserted in it and no batter sticks to the toothpick.

Some Reasons why the Baking is not Always a Success.

Girls forget to watch the fire, and put on coal at the wrong time.

They are apt to think that any oven will bake, and so do not test it.

Cake is not put in the oven at once after mixing.

The leavening agents are not cold.

Girls sometimes forget to move the cake from the bottom to the top shelf at just the right time.

Girls sometimes forget to watch the cake and test it with the toothpick before it is overdone.

An interested cook is usually a good cook.

CHAPTER V

SENSIBLE DIET[1]

Note to Teachers.

The first thing to do in this lesson is to read over the chapter carefully. Each girl should have her book and follow as the girls in turn read aloud. The teacher should take all the time she thinks necessary to explain the new words as they occur in the text. It will take all of one lesson to go over the chapter carefully in this way, not omitting the sample meals at the end of the chapter, because until these are clearly understood by the pupils, it will not be possible for them to go on and do original work.

The second week's lesson may take up the actual cooking of a breakfast, the week following, the preparing and cooking of a dinner, and the week after, the preparing and cooking of a supper. The combination of foods or the menu used at these meals should be selected in the following way:

Each girl should prepare at home the menu for an entire day — breakfast, dinner, and supper,— taking into consideration the idea of economy, nourishment, digestibility, and balance of foods. These menus will be handed to the teacher, and each one discussed by her before the entire class. Every girl must be made to feel that her work is thoroughly appreciated and in no way be made to feel ashamed of any errors that may occur. After all the menus have been thus criticized, the best menu of each meal should be chosen as the one to be cooked in class. Thus, if a girl has planned a good breakfast, but not so good a supper and dinner as another girl, her breakfast should be chosen, while the other girl's supper or dinner should be selected.

[1] This chapter is rewritten from a paper by Eugene Lyman Fisk, M.D., a New York doctor, read by him at a meeting of the Medical Society of the County of New York.

Sensible Diet.

Why do we need advice in regard to what we eat? Why should we not eat what we want when we want it, so long as we feel well? The answer is that we do not know that because we feel well to-day we shall continue to be well ten years hence when the result of our diet has had its effect on our heart, brain, liver, or kidneys.

We know that the average person is not as strong and well as he ought to be, so that we have the right to consider whether there is not possible some improvement in our food, as there is certainly possible an improvement in many of our other daily habits. Wise men have been for some years testing the results of food, and they have found out how an improvement in health is possible.

There are two ways of treating this subject:

First. To prepare a daily list of foods, and to ask you to have faith enough to believe that they are what you ought to eat.

Second. To outline a few important principles in regard to food, and then to let you make up your own bill of fare.

In this chapter we shall try to make some of the principles clear, and in addition we shall add a few simple bills of fare at the end.

The practical questions that confront the housewife are: What is the cheapest, best-tasting and most digestible food that will keep a family in the highest state of health? What are the most important food requirements? What are the least important?

The most important foods for the human body are energy foods. These energy foods are called carbonaceous foods. Just as coal, the simplest form of carbon is fuel for a steam engine, so are the carbonaceous foods

fuel for the human engine. Carbonaceous, or energy-giving foods are sugar, starches, and fats. The sugar and starches are called carbohydrates; the fats are called hydrocarbons; but the single term carbonaceous covers all. It is well for us to get familiar with these terms. For the average human body about six-tenths of the heat or fuel needed should come from the carbohydrates, namely, sugar, potatoes, bread, cereals, and vegetables. Three-tenths should come from hydrocarbons, namely, fats, butter, oils, milk or cream, and the fat of meat, the latter the least desirable. A person who exercises a good deal, or works very hard, needs more fuel food than one who does very little with his body.

The least important foods are those which we take for the purpose of building up or repairing the body. These are the nitrogenous, or protein foods. We have seen that from energy-giving foods we should get six-tenths plus three-tenths of our needs. This leaves one-tenth, and that one-tenth should come from what are called proteins. Examples of these are the lean of meat, fish, all flesh foods, white of eggs, and cheese. Certain vegetables are also rich in protein, especially peas, beans, and lentil. There is protein also in nuts, cereals and bread. These latter foods contain both elements, heat and energy.

Now, after a skyscraper has been built, we do not keep piling brick and mortar and steel girders into it. A certain amount of wear occurs, and a limited amount of repair material is needed right along. So it is with the human body. The body having been built, these protein materials are needed in limited quantities for maintenance; not more than 5 per cent. is needed for growth. These proteins can also be used for energy, but they are an expensive source of energy, just as oak or mahogany

wood is an expensive fuel to burn in the furnace. If the body takes in too much protein fuel, the intestines become poisoned. Careful experiments by many wise men in this country and in Europe have shown that we can have sound health and strength on about half the quantity of protein or meat foods that are generally eaten. Increased muscular work does not call for more meat, but for more energy food. "More work — more meat" is not true. It is true that a man doing hard outdoor exercise can burn up greater quantities of meat or protein food than a man working quietly in the house, but he may still poison his body, and the meat food is an expensive fuel from a financial as well as a health standpoint. The homemaker, for these reasons, should keep herself and her family from too much of this class of foods. There is less risk of injury from peas, beans, lentils, eggs, cheese, and nuts than from meat. Such foods are likewise cheaper, so a goodly portion of the protein should be got from food other than meat. Meat makes an acid gas in the intestines, and does not stimulate them, and they are apt to become sluggish and not throw off the poison or waste. Meat, fish, or eggs once a day will keep one's body fairly safe. Many people keep in good health without any meat, but until we know more about it, it is well to keep meat in our dietary so long as it is used in small quantities.

Other important elements in our foods are the fruit and vegetable acids and alkaline salts, and other inorganic material such as phosphorus and iron. These elements are not exactly foods, as they do not supply energy and are little needed for repairs, although they enter into the bone, teeth, and other tissues, and are needed for growth and to maintain a certain chemical balance in the blood and elsewhere. Lack of these

elements, especially lime, may cause serious disease. For this reason, we must eat in abundance fruit and green vegetables. These keep the kidneys active and the blood healthy.

As to arranging a dietary with the above to guide us, it is necessary to have at least a rough idea of the energy requirements of the body. This is measured in what are called calories. Calory means a definite, easily understandable unit of measure. Just as a scuttle of coal will produce a certain amount of steam pressure, so will a definite quantity of food produce a certain amount of heat or energy when burned in the body,— in other words, when digested and absorbed. The body is losing heat constantly, and this heat must be replaced or the body will grow cold and the internal activities will stop.

A woman weighing 155 pounds requires 2900 calories a day. The number of available calories in the various foods have been determined by scientific experiments.

Nuts are high in protein and calorific value and can be substituted for meat and other protein foods, but they should not be added to a meal already rich in protein, such as an ordinary Christmas or Thanksgiving dinner. Peanuts, or peanut butter, and apples, form a well-balanced ration that would supply the body's needs at small expense. Macaroni and cheese also forms a well-balanced ration of protein, carbohydrate, and fat. Needless to say, foods must be made digestible by cooking, or their calorific value is lost.

It is not so hard to think in calories as one might imagine. Take a dinner and analyze it,— Roast beef, 100 calories, Bread 150, Butter 150, Rice Croquettes 128, Baked Potatoes 100, Bread Pudding 128, Sugar (two lumps) in coffee 100. Total 956, about one-third of the

day's requirements in calories. This meal has too much protein, but the balance would be restored by lack of protein and more green vegetables and fruit at the other meals. An ordinary portion of these hearty foods averages about 100 calories.

When one is working hard, the portions of bread, potatoes, butter, and rice can be increased and will easily raise the meal to the energy requirement, without the addition of a protein ration. If a man has worked hard and is hungry, help him to more potatoes and vegetables, or simple pudding, but do not increase the meat portions. Corn bread and syrup will carry him far on a cold day, and if he works hard he will burn it up completely; there will be no ashes, as in the case of meat or other protein.

The beacon lights I would hang up are as follows:

To keep you warm and give you energy for work, eat energy or fuel foods, potatoes, bread, cereals, corn bread, syrup, and other sugars.

To keep your muscles and organs in repair eat a limited and fixed amount of repair foods, meat, eggs, cheese, nuts, flesh foods, peas, beans and lentils.

Do not increase the repair foods with increase in work or exposure to cold; increase the fuel foods for further energy.

Eat fruit every day. Canned fruits are good. Cooked fruit is often better than fresh fruit.

Eat green vegetables whenever you can get them. Thoroughly wash all raw foods.

Have plenty of bulky vegetables of low food value, like carrots, parsnips, spinach, turnip, squash and cabbage to stimulate the bowels and give flavor to the diet and prevent over-nourishment.

Eat slowly and taste your food well, and it will slide down at the proper time.

Do not let any one bring a grouch or a cross feeling to the dinner table; it will upset all the food values.

A Sample Italian Menu.

Breakfast

Apple Sauce
Scrambled Eggs
Rolls or Italian Bread
Coffee or Cocoa

Lunch

Polenta with Tomato Sauce
Bread Sticks

Dinner

Minestra or Vegetable Soup
Veal Cutlets
Mashed Potatoes
Lettuce Salad with French Dressing
Italian Bread
Tea

A Sample Italian Menu.

Breakfast

Oranges
Poached Eggs on Toast
Cocoa or Coffee

Lunch

Split Pea Soup
Jam Sandwiches

Dinner

Meat Balls with Spaghetti
String Beans
Salad with French Dressing
Fruit

A Sample Day's Menu.

Breakfast

Oranges
Oatmeal with Milk
Coffee or Cocoa Toast

Lunch

Bean Soup
Bread and Butter

Dinner

Vegetable Soup
Creamed Codfish Baked Potatoes
Baked Corn Pudding
Apple Pie

Sample of Daily Food Expenditures.

For Family of Six.

Father, mother, and grandmother.
Boy of 15 years.
Child of 6 years, and baby 1½ years.

The child of six years has four meals a day, and the baby five meals. The total cost is $1.78 or $.29⅔ per person per day.

This does not provide for anything left over.

Breakfast

Stewed Prunes
Oatmeal
Coffee Milk
Scrambled Eggs
Buttered Toast
Baked Apple for Baby

COST OF BREAKFAST

1 cup oatmeal	$.02
4 tbsp. coffee	.04
6 eggs	.20
½ loaf bread	.02½
½ lb. prunes	.06
1 qt. milk	.08
2½ tbsp. butter	.03½
8 tbsp. sugar	.02½
1 apple	.02
Total	$.50½

Lunch or Supper

Pea Soup
Tea
Bread and Butter
Apricots

COST OF SUPPER OR LUNCHEON

⅔ lbs. apricots	$.10
1 loaf bread	.05
2 tsp. tea	.04
3 tbsp. butter	.04
1 pint milk	.04

2½ tbsp. sugar	.01
Pork for soup	.04½
1 onion	.01
1 baked potato for baby	.02
1 egg	.05
1 cup peas for soup	.05
Total	$.45½

Dinner

Pot Roast with Browned Potatoes
Lettuce Salad
Bread and Butter
Corn Starch Pudding

COST OF DINNER

3 lbs. beef	$.48
6 potatoes	.08
1 head lettuce	.05
Dressing for salad	.03
1 loaf bread	.05
2 tbsp. corn starch	.01
4 tbsp. sugar	.01
Seasoning for corn starch	.03
1 pint milk	.04
1 extra pint milk a day for baby and girl of 6	.04
Total	$.82

1. What does the protein in foods contribute to our bodies?

2. What is carbohydrate in food? Name some foods

that contain carbohydrates in large quantities. What does carbohydrate give to our body?

3. Name foods rich in fats.

4. What value is there in food except the protein, carbohydrate, and fats?

5. Why are large quantities of protein and fat-giving food needed in cold climates and during our winters? Why are fruits and vegetables valuable in hot weather?

6. Can you read food-charts as easily as you read a printed book? This is necessary for intelligent work.

7. Can you work from printed receipts without help? Master them; you cannot carry a teacher about with you.

Never think that what you do is as important as what you are. If you learn to respect your body, you will demand that the food that nourishes it is the right food as truly as that the house it lives in conforms to every law of health and beauty.

CHAPTER VI

DIVISION OF INCOME

Note to Teachers.

The purpose of this chapter is to give every girl a clear understanding of such expressions as income, percentage, division of income, household accounts, budget, etc. Every girl should know what it means to keep account of the money coming into a household and the money going out of it and why this is necessary.

The author of this book suggests that the chapter be read aloud at first, with many pauses; that there should be frequent explanations on the part of the teacher; and that the pupils should be given an opportunity to ask questions about anything which they do not understand. The next step will be for the teacher to decide which one of the two methods of keeping accounts here given is the better one for her pupils to practise. To try first one and then the other would confuse the class.

If the envelope method of keeping accounts is selected, get stout manila envelopes for the purpose. Make paper money to the amount of $20 (one week's wage at a yearly income of $1040), or make $86.66 of paper money — the monthly income from the same year's wage. Have plenty of change, as well as some bills. The class must work out the amount to be allowed for each expenditure and put it into the right envelope. When an imaginary shopping trip is made the list of articles to be bought should be written down by the teacher, and the girl she selects to do the shopping must take the money needed from the proper envelope and put a slip in its place showing the expenditure. Start every class with a new set of envelopes.

If the pad method is selected, use sheets like the sample

given below, and follow instructions as shown later in the chapter. Have enough sheets to give more than one to every pupil of every class. Mistakes will be made at first, and the girls will have to go over the work again and again.

Weekly Expense Account.

For the week ending_____ **To expend $**_____

Day of Month		20 per cent Rent $	43 per cent Food $	5 per cent Fuel and Light $	10 per cent Clothing $	4 per cent Insurance $	2 per cent Recreation $	16 per cent Sundries $	100 per cent Total $	Savings $____ forward Deficit $____ forward
	Monday									
	Tuesday									
	Wednesday									
	Thursday									
	Friday									To reckon percentage multiply the total sum to expend by the per cent thus, 43% (per cent) of $20. a week, is .43 times $20.=$8.60 .43 20 8.60
	Saturday									
	Sunday									
	Total Receipts $____									
	Expenses $____									
	Savings $____									

Division of Income.

What is income?

The dictionary says that income is the money which "comes in to a person as payment for labor or services, or as gain from business, land or investment."

The income of an ordinary family is what is paid the father each week for his labor, or what he makes from his store or office; and added to this is such money as the mother or the children earn by their individual labor.

Sometimes an income may be increased by renting rooms in the home to outside persons. All this money added together makes up the family income.

Why is it necessary to divide one's income before spending it? Why must one plan how to spend it beforehand? Because certain expenditures are absolutely necessary to keep us alive, while other expenditures are what we call luxuries — we can live and be happy without them.

Wise business men and women have taken hundreds of family incomes and have calculated what part or what percentage of these incomes should be spent for food, what percentage for rent, what for clothes, etc. Restaurants, stores and hotels are run in this way. Experience has shown that the man or woman in charge of a restaurant will not succeed if he spends more than 43 per cent. of his income for food; 28 per cent. for the cook and waitresses, or what is called labor; and 11½ per cent. for rent and all other necessary expenses. The percentage must stay the same whether the restaurant makes little or much money; that is, if he decides that his expenses shall amount to 82½ per cent. of the income, he pays out about five-sixths of what comes in and no more. If he takes in $100 a week, $82.50 will go to buy food, pay the cook and the other necessary charges. If he has a larger restaurant and takes in $1000 a week, he can have better food, more people to work for him, and spend $825.00, but the percentage is still the same; he is still paying out about five-sixths of what he takes in.

Now, we should run our homes in much the same way; but, as a family's income increases, the percentage for food, rent, fuel, becomes smaller. That is, if a man gets $20 a week, he spends (or should spend) about $13.50 for food, rent and heat. If he gets $25 a week, he

spends little more for these necessities, but more for clothes, education, recreation and health. The division of an income differs in different places. Rents in large cities are twice as high as in small towns. Fuel in the country is less than in a city. Carfare is an important item of expense to a man in the suburbs, while it does not count to a man who can walk to business. The division in this chapter is that of the average city family.

There are people so rich that they do not need to divide their income before spending it; but many rich people do make this division. Some of them put into their budget (that is, their calculations) a certain percentage which is to be given away. Some give away 10 per cent. of all the money that comes in, some even more. Many families fail to live well, not because they have not enough income, but because they do not calculate before spending it how it can be spent to the best advantage.

It is (as every girl knows) the woman, the housewife, the mother in the home, who manages the expenditures; and the girls who study this book are the housewives of the future. An orderly mind in this matter of money and how to spend it, is what is lacking in nearly all homes. To have this clear sense of order in household management, several things are necessary.

First. A woman must feel within herself the ability to do every kind of housework perfectly with her own hands. This gives a consciousness of power and does away with the feeling of confusion that often comes from facing tasks of which we are not the master.

Second. Be a good marketer. Forty-three per cent. of the average small income goes out for food. To buy well is almost half of the battle won.

Third. Know the value of foods, so that you will not spend 25 per cent. for water and waste, and only

18 per cent. for nourishment. Make your money buy just as much as possible of the food that makes bone and tissue and good red blood.

Fourth. Know how to cook. Make the most of the food purchased, bringing out all the flavor, and assuring its digestibility. Never waste any left-over food.

Fifth. Be an expert at sewing and mending and making over clothes. A woman who can't sew, trying to live on a small income, will never clothe her family well on the allowed one-tenth of her income. Darn the stock-

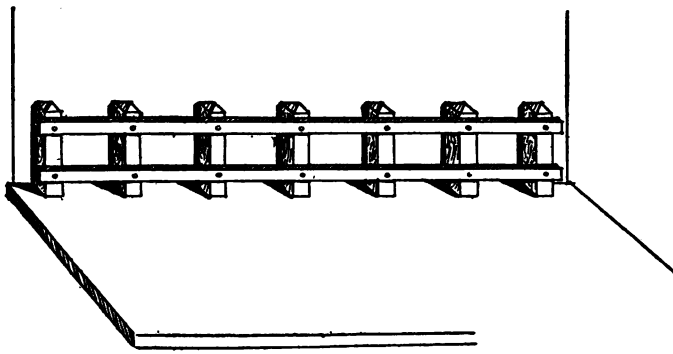


Fig. 2. Rack for Writing Desk

ings when the holes are small. Sew on a button when it first comes off; buttons cost very little and take little time to sew on, but one would think they were worth dollars, so many safety pins are used in their place.

Sixth. A simply furnished, orderly house is the expression of a good housekeeper. When you visit a house where there is a place for everything and everything is in its place, you know at once that the housewife has a good business mind. There is one article of furniture that is almost a necessity in this home, if accounts are to be kept: that is a desk or table for writing, and a

drawer in which to keep papers. Buy a kitchen table for $2.40, with a drawer, and with square legs. Make an alcohol stain by mixing wood alcohol with enough dry stain to make the required color. Stain the entire table with this. After it is thoroughly dry, rub off all of the dry stain with a soft cloth, and lastly, wax with any floor wax or common beeswax. Make a rack for the back of the desk to hold bills, papers, etc. (Any carpenter can make a rack like the picture.) Have a tray to hold pens and pencils, a glass ink-well that can be washed and a large blotter. This desk, completely equipped, will make it easier to keep the family accounts; no one is likely to do this work well if the materials are not handy. Remember, no work is accomplished without labor.

From now on we will imagine five people when we speak of a family: father, mother and three children. Each family has its own standard of living. For instance, a family paying $15 a month for rent has different food, different clothes, lives in a different way from the family spending $100 a month for rent. Not until the income is more than $1000 a year does the style of living change much; then the standard of living is different in every department. In the household with the smaller income, the women work and keep no servant; in the one with the larger income, it is possible to employ a servant to do the housework. Everything in the two houses will be different, from the furniture to the cut of meat that is bought for dinner. But the woman who makes a pleasant home, and feeds her family well with the smaller income, proves herself the more remarkable business woman, although her window curtains may not cost as much, or her hands be as soft.

A family cannot be said to have a living wage (or income) unless enough money comes in every week to

buy sufficient food to nourish thoroughly every member of the family; to provide a shelter that gives each person enough room to sleep and eat and live in comfortably, and clothes enough to keep the body warm; to secure an education for the children up to the age of fourteen (at the very least); and to have enough money besides to keep the house and its equipment in repair. To be an adequate income there must be some money for recreation (as perfect health is seldom possible without this contrast from work) and a little money to put away against possible sickness. If there is not this ability to save, the wage earners worry, and worry is like poison, it saps the strength that in a worker is turned into the labor that is exchanged for money.

What is the lowest living wage for a family of five? What is the least a family can live on and keep out of debt? Different writers give different figures, but in New York City $832.00 a year is given as the least, or $16 a week. But $1040 a year, or $20 a week, is a more possible living income. So, in learning how to divide the money that a family spends we will take this sum.

We learned before in this chapter that with an income of from $832 to $1040, the expenditure for necessities is about the same; with the larger wage, however, more is spent for clothes and extras.

There are two ways in which it is possible to learn to keep accounts — by envelopes or by weekly pads. With either method, the percentage to be expended for each item is the same. Forty-three per cent. of your income, or nearly half of what comes in each week, should be spent for food; only 20 per cent. for rent (if your family has only $16 a week to live on, not more than $3.20 a week, or about $13.50 a month should be spent for rent). On $20 a week you can take an apartment for

$17.33 a month. Only 5 per cent. of your income should be spent for coal and gas, 10 per cent. for clothes, and so on. Starting with the pad system — on one sheet of the pad each girl can work out for herself how her income should be divided. There should be fifty-two sheets in each pad, one for every week in the year. Each sheet is divided into columns giving the percentage of the income allowed for each household expense, and each column is divided into spaces for the days of the week. In the lower, right-hand corner is shown how to reckon percentage. At the head of each column is a dollar mark. Reckon for yourself how much, with different weekly incomes you should spend for each item, and then see how nearly you have approached this at the end of the week.

If you try this method of keeping accounts, beside the pad an account book should be always at hand. No matter where you go, take your account book with you (a penny blank book will do), and make an entry in it every time you spend money for carfare, marketing, clothes, rent, etc. Put down the amount you spend and what you spend it for. At the end of each day enter the total of each expenditure on your pad. For example, "Monday" you spend and write in your account book the following items:

Bread	$ .05
Potatoes and fruit	.20
Gas (quarter meter)	.25
Shoes mended	.50
New pail	.25
Carrots	.05
Soup meat	.10
Sugar	.05
Milk	.07

Moving pictures	.15
Carfare	.10
Coal	.20
Month's rent	17.33

That evening write in the rent column of your pad after Monday $4.00; for although you pay by the month, a rent of $17.33 comes to $4.00 a week. Your food, on Monday, added together comes to $.52; gas and fuel $.45; clothing (that would include the mending of shoes) $.50; you do not put anything in the insurance column for we will suppose that the collector comes to you on Fridays. Recreation (that takes in carfare and moving pictures) is $.25. The new pail for $.25 will go in the sundries column.

To practice this method in class, six girls may be selected, and each girl may be assigned one day in the week to go on an imaginary shopping trip. The prices of the articles bought by each girl should be entered in the correct column. After the entries have been made for the whole week, add all the expenditures together and see how far out of the way they are. If they come to more than they should, put the amount under deficit, and realize that you should not spend any more on the accounts where you have exceeded the average percentage until the amount has been made up.

Every girl who has the care of the house expenditures may have a pad of this kind.

To use the envelope method one should have seven envelopes. At the top of one write "Rent," of another "Food," then "Light and Fuel," "Clothing," "Insurance," "Recreation," "Extras." If other divisions are more convenient, they may be used; these are merely suggestions. In each envelope put the amount of the

week's wages that can be spent for that especial account, calculating on the same percentage basis as that used with the pads. When any member of the family takes money out of one of the envelopes, she must put in its place a slip of paper on which is written the amount taken out, by whom taken out, and what it is spent for. At the end of the week there should be in each envelope either the money or the slip accounting for the money. On the outside of the envelope, the expenses for each day can be entered and added together at the end of the week to see how nearly the amount spent compares with the amount that should have been spent. If the money in the envelope marked "Clothes" is insufficient, you may have to borrow from the envelope marked "Food," but in that case enter the loan on a slip and pay back the "Food" envelope next week. This also can be practised in class with make-believe money and make-believe buying.

When a woman knows how much money she can spend she should not spend more. A mistake one month will be corrected the next.

CHAPTER VII

MARKETING

Note to Teachers.

It is not possible to have pupils go to market with the teachers often enough to secure for them any real acquaintance with foods or knowledge of how to buy. One visit to the butcher shop is of some benefit in learning the cuts of meat, but by means of charts in the quiet of the class room a teacher can help her pupils fully as much, if not more. This marketing lesson is one that must extend through the entire year. Every time there is a cooking lesson there will be buying. This buying should be done by the pupils, and after each article is bought and brought into the kitchen it should be examined by the class, the price discussed and the questions asked and answered from every point of view. Have we bought the best for the money spent? Is it clean material? Was the shop sanitary? Has any one any suggestion as to how this particular purchase could have been better made? The teacher will vary the purchases by buying as many different kinds of food as possible. The table of weights and measures on page 158 will help to show the pupils the advantage of buying by the quantity. Send a girl out to buy, for example, 2 cents' worth of sugar, 10 cents' worth of butter, a package of farina, and then from the groceries in the kitchen have her measure out the same amount. Compare the percentage of price paid for the small amount with that paid for the large amount.

How to Learn Marketing.

Marketing is like cooking, the only way to learn how to cook is by cooking day after day, making mistakes, producing unexpectedly good results, blundering along,

working, working, working, until finally, you instinctively know the taste of the pudding before you begin to combine the ingredients. You know instantly what flavoring is lacking in the stew the moment you taste it. You can make an entire meal from the left-overs in the ice box by adding here and combining there; and never will you waste so much as one egg shell. Only then are you a first-class cook. Marketing is mastered in the same way. Not one visit to the market with a teacher can teach you how to buy. All that teachers and books can do is to give you the rules to work by and a few underlying principles that you must fit to your exceptional case. Few cases conform exactly to the general type portrayed in books on Food and How to Buy It. Taste, education, amount of money, digestibility, time, all go toward making your case different from others.

Don't begin to market after you get to the store. The ice-box, the window shelf that holds the left-over food, the stale-bread box; these are the first places to visit. Any one can go to the market and buy steak, vegetables, salad, dessert, but only an artist of the kitchen can see in the liquid part of the left-over mutton stew the foundation of a clam chowder; or can make good meat balls from the strained off pieces of meat, the few pieces of the stale bread in the bread-box and one onion, by putting them through the meat grinder, and seasoning correctly. To a woman with a creative mind, the cold cereal of yesterday is not something for the garbage pail, but thickening for soup. All children do not like cereals plain. A wise housekeeper is glad of the chance to give such a child the same nourishment in combination with other foods. In that same wonderful ice-box you may find the water that yesterday's corned beef was cooked in, or the vegetable water

from yesterday's beets. At once you think of pea soup, using the corned beef water instead of pork, or you will spend five cents for vegetables and use the beet water for soup stock. A few pieces of stale cake are in the cake box; that means that with one egg, a little milk, sugar and chocolate you have the pudding for dinner.

Now when you start for the butcher's and the grocer's you buy only what will supplement and make into new combinations the food at home.

What are some of the foundation principles that every housewife should carry with her to the market? We can mention only a few:

Waste is one of America's greatest faults.

You want the meat of an egg to-day rather than the egg shell, but it is wasteful not to foresee that to-morrow morning you will want the shell to clear the coffee. In the same foolish way, women buy meat, and stand and look on while the butcher (having made those women first pay for the entire weight) trims off the fat, and cuts out the bone, and throws this valuable food in a box under the counter to be sold again; and yet these women know that the bone is good for soup and the fat for frying. Why do they do it? Indifference and laziness.

Another rule to carry to market is: don't buy in small quantities. The author of this book knows that space is valuable, and that storage place is sadly lacking in most homes, but many buy five cents' worth of this, ten cents' worth of that, because no thought has been given to using what space there is.

Glass jars take up very little room; they cost only from five to ten cents each, and they last forever. Put a shelf in the kitchen; and on it a row of quart jars, each holding a dry grocery; and you have added to the beauty of your kitchen, you have saved money by buying in

quantity, and you have saved the labor of running out every morning for the flour, sugar, coffee and staple articles that should be always in the house. See frontispiece, "A Canning Lesson."

Don't try to buy cheaper than the market price. If butter is selling for 41 cents a pound, and you can buy it for 30 cents, there is something the matter with the butter. When you think you buy 45 cent eggs for 25 cents, you don't; you buy only 25 cent eggs. The salesman deceived you by making you believe you were saving money, instead of telling you that you were paying a high price for bad eggs.

In some shops sugar, flour, rice, etc., is all done up in pound packages; "to save time," you are told. Have the dry groceries you buy weighed out before you. It takes a little more of your time, but you get the full weight for your money. When you buy crackers by the package, you pay for paper and the labor of packing. One half pound of loose soda crackers has 35 crackers, and costs 5 cents. One package of soda crackers has 24 crackers and costs 5 cents. You sacrifice eleven crackers for the paper package.

Meat.

To buy meat to the best advantage a girl must know the different cuts; which ones are tough and which are tender; where the juicy parts lie; what the proportion of meat is to bone in each cut and why the quality and price of the meat is different in one part from another. This knowledge may be gained by a careful study of meat charts; by asking questions of those who know, and more than all else by going to market and learning by experience.

To study and acquire a perfect knowledge of the charts

given in this chapter is the best way for a class to study this question of meats.

Take, first, Fig. 3. This is a picture of the bones in an ox. The vertebræ run from the head to the tail. Study the bones in the spine with the help of the text underneath, so that when you see those bones in the butcher shop you will know at once from which part of the ani-

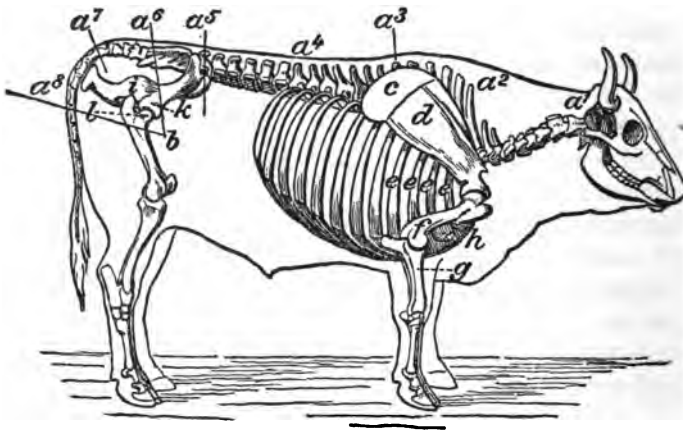


Fig. 3. Location of the Bones in the Various Cuts of Meat

*a*1 to *a*2, neck; *a*2 to *a*3, six chuck ribs; *a*3 to *a*4, seven prime ribs; *a*4 to *a*5, loin or porterhouse; *a*5 to *a*6, thick or hip sirloin; *a*6 to *a*8, rump piece; *a*7, where rump is divided into top and tail end; *c*, *d*, shoulder-blade; *e*, *e*, *e*, *e*, cross-rib-piece; *f*, *g*, bones in shoulder of beef; *h*, sternum; *i*, head of thigh-bone; *k*, socket; *l*, ball.

mal each cut comes. As the beef hangs in the market it is split in two down the back bone. Remember this when you try to locate the bones as seen in the picture. See Fig. 4.

A careful study of the text under these two cuts will give you a clear knowledge of where the porterhouse steak, the rib roasts, the chuck, the round steaks, etc., come from. No matter, at first, about the cost; learn

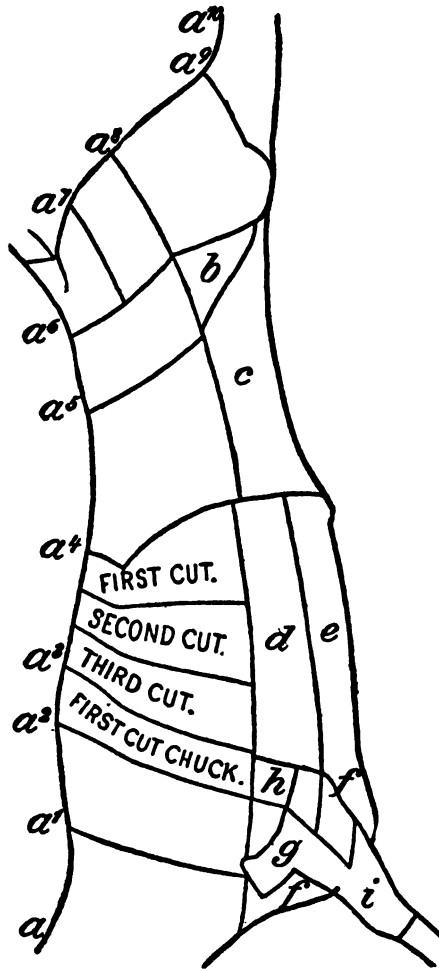


Fig. 4. Side of Beef — New York Method of Cutting

a, neck; *a*2 to *a*3, six chuck ribs; *a*3 to *a*4, seven prime ribs; *a*4 to *a*5, porterhouse roasts or steaks; *a*5 to *a*6, thick or hip sirloin; *a*6 to *a*7, tail end of rump; *a*7 to *a*8, top of rump; *a*8 to *a*9, round; *a*10, leg; *b*, top of sirloin; *c*, flank; *d*, plate piece; *e*, navel; *f*, *f*, brisket; *g*, shoulder; *h*, cross-rib; *i*, shin.

only the location of the various cuts; be familiar with the names, and learn what cuts have little and what have much bone.

Now pass on to Fig. 5 and again study the different cuts; this time with thought as to the price and the quality of the meat.

The cuts of beef can be divided into three qualities; first, those from the middle of the back, called ribs.

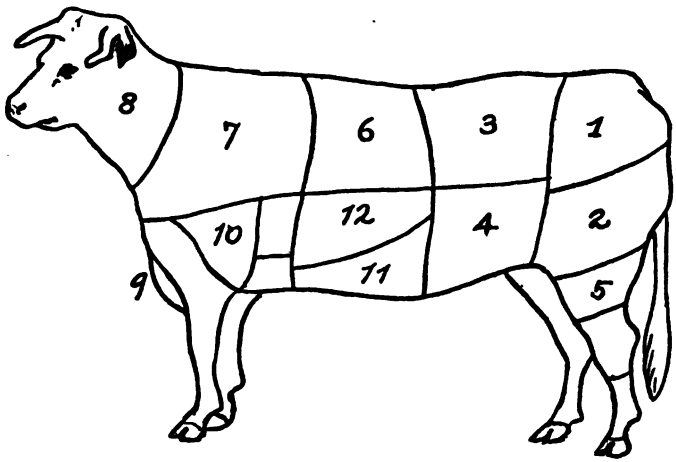


Fig. 5. Diagram of Ox

1, rump or short steak; 2, round; 3, loin; 4, flank; 5, leg; 6, ribs; 7, chuck; 8, neck; 9, brisket; 10, shoulder; 11, navel; 12, plate.

There are seven of these ribs, as you can see by counting in Fig. 3. They are marked 6 on Fig. 5. Porterhouse, sirloin and Delmonico steaks are cut just back of these ribs. These are the most expensive cuts; in New York City the meat costs from twenty-four to thirty cents a pound. These roasts and steaks are also the tenderest part, because they are the least muscular, that is the least exercised. There is, as you will see in Fig. 3, a great deal of bone that you pay for when you buy these expen-

sive cuts. As the butcher cuts the meat from nearer the head and nearer the tail he charges less. Cuts from these parts of the beef are the second quality. Rump and round, marked 1 and 2 on Fig. 5, are the back cuts, and the chuck (marked 7) is the part near the head. In both of these extremities the meat is more muscular. Watch a cow moving its head back and forth, or notice the constant motion of its hind legs, and you will see at once how much more the muscles are used here than in the back. Although this makes the meat less tender and therefore cheaper, we find in these second quality cuts less bone and fat than in the rib; and the meat has more flavor, and is juicier. The tenderness is gained by longer cooking. The chuck and round make excellent rolled steaks and pot roasts. The round is used because of its juicy quality for making beef broth, beef tea, scraped beef and stew. These second quality cuts, in New York, are from 18 to 24 cents a pound.

The third quality is the toughest meat; that on the legs, that part below the neck called the brisket (marked 9 on Fig. 5) and the meat on the belly, called the navel and plate (11 and 12 on the chart). From the neck we get good stew meat, beef for broiling and mince meat. The brisket, navel and flank are often put into brine and sold as corned beef. The heavy part under the ribs is sold too for stew meat and pot roasts. The price of this meat is from 16 to 18 cents a pound. It is from the legs, or shin as it is called, that much of the good soup meat comes; the bone adding to the flavor because of the marrow inside and the gelatin from the tissue. This shin or soup meat costs 16 cents for the meat, not counting bone which is thrown in.

Every part of the animal is utilized. The bone which is not used in our kitchens is ground into manure or

turned into numerous articles; the skin is made into leather, the ears and hoofs into glue; the hair is mixed with mortar; and the horns are cut and molded into spoons and other useful articles.

Mutton.

This meat is called lamb if the animal is less than a year old, after the year it is called mutton. The first eight ribs on a sheep are what we call mutton chops, next

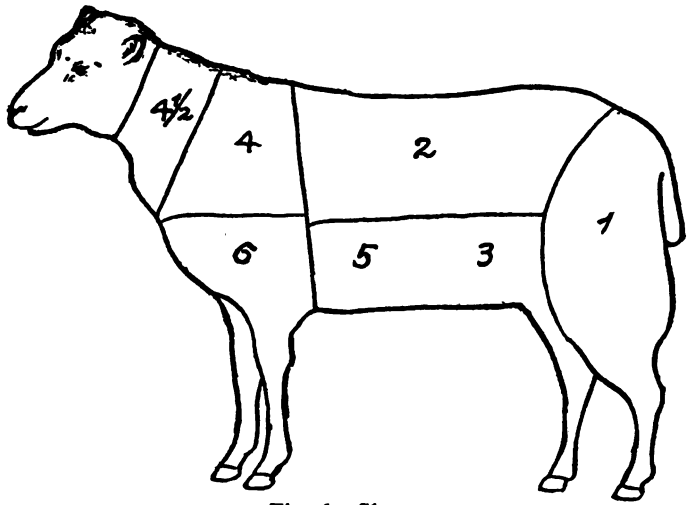


Fig. 6. Sheep

1, leg; 2, ribs and loin; 3, flank; 4, chuck; 4½, neck; 5, breast; 6, shoulder.

to these rib chops and nearer the tail are the loin chops. (These rib and loin parts are marked 2 in Fig. 6.) The loin mutton chops are what in beef we call steaks; they are better to buy than the ribs because there is more meat in comparison with the bone. When the thin bones of the rib chops are trimmed they are called French chops.

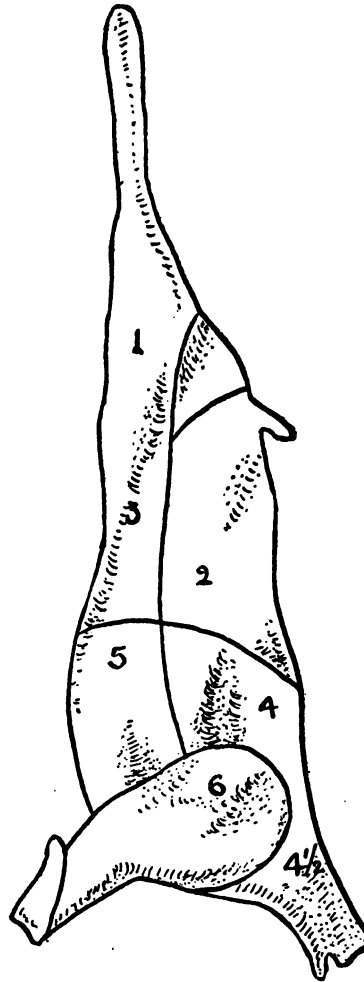


Fig. 7. Mutton

1, leg; 2, ribs and loin; 3, flank; 4, chuck; 4½, neck; 5, breast; 6, shoulder.

The leg is the most economical cut of mutton because there is so little waste. The shoulder makes a good, cheap roast for a large family. Roasts, stew and pot pie meat are cut from the shoulder, the chuck and the flank.

Pork.

Pork is the flesh of the hog. Pork is more apt to be diseased than any other meat and the ways to know healthy pork from unhealthy should be known to every

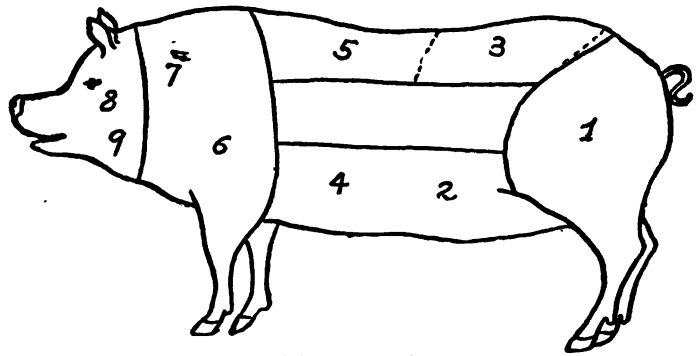


Fig. 8. Pork

1, ham; 2, flank; 3, loin; 4, brisket; 5, ribs; 6, shoulder; 7, neck; 8, head; 9, head.

housewife. Pork should be cooked a long time and it is a good rule to make not to buy pork in hot weather.

The quality of the meat depends upon many things; age of the animal, kind of food eaten by the hog, the way the meat is prepared for market and the length of time it has hung after being killed and dressed. The dirty food which many pigs eat is the chief reason for the bad meat which we must avoid in buying pork.

A large part of the hog is too fat to eat fresh, and that part has to be salted down and sold as salt pork.

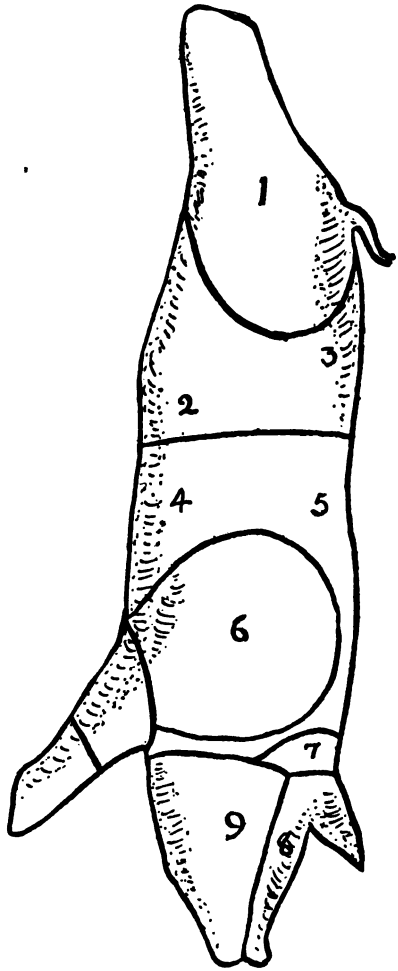


Fig. 9. Pork

1, ham; 2, flank; 3, loin; 4, brisket; 5, ribs; 6, shoulder; 7, neck; 8, head; 9, head.

As in the case of beef and mutton the ribs and loin are the best cuts. These are marked 3 and 5 in the Figs. 8 and 9. When ready for the table we know these cuts as pork chops and roast pork.

The shoulder, marked 6 on the charts, is often used fresh for roasting and boiling.

Ham comes from the leg; and bacon is pork which has been salted and smoked as well. The brisket, in the belly of the hog, is the part used most often for this bacon.

Salt pork is made from the flank, the head, the brisket. Any of the fat part can be salted, in fact, is salted, down and sold as salt pork.

Sausages are made from pork; sometimes alone and also in combination with beef or veal. It is very easy to put any left-over scraps into sausages; the only way you can be sure you are getting good meat is to have confidence in the sausage maker.

How to Know Good Meat From Bad.

Only by experience can the odor of bad meat be detected. No teacher can convey by words the difference between a fresh and stale odor.

Good beef is firm, fine-grained, bright red in color, moist, juicy. The fat is light straw color, the suet white, firm, dry and crumbly.

Bad beef is coarse meat, flabby, dark in color. The fat is dark yellow. The suet oily and fibrous.

Diseased pork has a dull appearance, with yellowish lumps through the fat and lean.

Fresh pork has fat which is firm, clear, and white, and the lean meat is pink.

The price of the different cuts is learned from daily experience, trying different markets until you feel a confidence in your butcher. *Never* go to any market that is

not clean. Leave any butcher that allows customer or employee to spit on the floor.

When porterhouse steak sells for 28 cents a pound, round steak should sell for about 20 cents, and the chuck steak in the cuts just back of the neck for 16 cents. In buying the chuck ribs for 10 cents you buy more than one-half bone. In the round, one-twelfth is waste, and in the expensive porterhouse cuts one-eighth. Of course, every girl knows that bone and fat are not really waste, but they are worth only 7 cents a pound not 25 cents. It is well, therefore, to know just the proportion of 25 cent meat and of 7 cent bone and fat that you are paying full price for. Never forget that when you buy meat you get less nourishment for your money than in other food. Such foods as eggs, milk, peas, beans, fish, cheese, give you the nourishment at less cost. Remember that a cheap cut of meat cooked slowly has more flavor than an expensive cut cooked quickly. The best way to reduce the meat bill is to cut down the amount of meat. It is never necessary to have meat oftener than once a day. Other foods can be substituted, such as eggs, cheese, milk, peas and beans. Meat also may be used in combination with vegetables and dough as in meat and vegetable pie; or in combination with cereal, as in baked rice and meat; thus the flavor of the meat is extended through a larger amount of food than merely the meat itself. Another way to get a better value for our meat bill money is to buy intelligently, getting cuts that have flavor and little waste and not to pay so much for the tenderness of meat. Depend on long cooking, and as has been said, use every scrap of fat and bone that is paid for. Meat is one of the most expensive items in the family food bill. It will pay to give much study as to how to reduce this steady drain on the income.

Fish.

When you think of buying fish, Friday, very likely, comes into your mind, but you can buy better fish and cheaper fish on other days than Friday, when the demand is less. Learn to appreciate the value of fish. It does not contain all the nutritive value of meat, but it is a good substitute. Buy fish from a fish dealer you can trust. If he cuts off the head, fins, etc., make him give them to you if you have paid for their weight. These fish trimmings are good for chowder.

Left-over fish can be made into half a dozen good dishes, so it is more economical to buy a good-sized whole fish, and to make it last for two days' meals, rather than to buy a small fish that is just enough; there will be more meat to the amount of waste in the larger fish. If the fish is cleaned at the fish dealer's watch to see that it is cleaned thoroughly. Above all, learn to tell fresh fish from stale. In a fresh fish the eyes are bright, the gills red, the flesh firm and without odor, the fins firm and erect.

A stale fish has not firm flesh, has an odor, and after being cooked is watery rather than creamy and is of a bluish appearance rather than white. To test a fish, put it in water; like an egg, it will sink if it is fresh, and float if it is not.

It is very dangerous to eat fish that is not perfectly fresh. Buy fish in their season, if you would have them fresh. Fish out of season are kept in cold storage.

From January to June shad is good.

September to March.....Oysters
June to September.....Smelts
May to September.....Mackerel

May to October.....Bluefish
All the year.....Cod, haddock and halibut

A reliable fish dealer will tell you what fish is fresh and in season. Ask before buying. Don't buy frozen salmon and pay a high price, when you can buy fresh cod for less than half the price. Haddock is a good, cheap fish for frying; it is firmer than cod. In buying a fish for boiling have it as firm as possible.

Buying Vegetables and Fruit.

Vegetables, like fish, should be bought when in season, for what we want is freshness. You can read book after book on the subject of vegetables, and the writers will tell you to "cook the vegetables the day they are picked." In our large markets it is hard always to buy these perfectly fresh vegetables; try for this freshness. Potatoes, onions, cabbage, beets, carrots, spinach, turnips, we have all the year. Corn, June to November; cucumbers, peas, squash, string beans through the summer months; asparagus, March to June; and so as you go to the vegetable market day after day, you will become as familiar with the different vegetable seasons as a country girl is with the times of the year in which the daisies, the violets and the wild roses come.

Another thing that is an important part of buying vegetables is to learn how much to buy. For example, peas in the pod, squash that boils down seemingly to nothing, are deceiving. The following list will be a guide, but experience is the best teacher:

Asparagus, 1 bunch will serve 4 people

Cabbage, a good, solid one,	will serve 8 people
Cauliflower	will serve 6 people
Carrots, 1 small bunch	will serve 4 people
Onions, 1 qt.	will serve 4-6 people
Peas, 1 qt.	will serve 4 people
String beans, 1 qt.	will serve 4 people
Tomatoes, 1 qt., 5 to qt.	will serve 6 people

Greens and salads should be crisp, and should have no appearance of decay or of being bruised or wilted.

Cabbage and cauliflower should look solid and have no discoloration. Don't buy very large or very small vegetables; there is much waste in the small ones and the large ones have lost some of their best taste.

A good pumpkin and a good winter squash will be dark in color, also heavy and hard.

These are only a few hints; the rest every girl must learn by marketing, not hurriedly or in a spirit of indifference, but going to market just as she goes to school, to learn something.

A business man would not think of buying goods until by feeling, looking and testing these goods in every way he knew the value of what he was buying, and yet a woman will go to market and take anything the butcher or the grocer gives her. Never let that be said of *you*.

CHAPTER VIII

CARE OF CHILDREN

Note to Teachers.

It is very necessary to have either a real baby or a doll in order to make the work in this chapter intelligible to pupils. It is seldom possible, and never fair, to use a real baby for the purpose of experimental work in school classes. A large doll can be effectively used to take the place of a real infant.

In beginning the study of the child, let us imagine that in the housekeeping center, or school-room, there is an unclothed, life-sized doll. Each teacher must be the judge as to whether the garments for this doll shall be cut before meeting the class and only the sewing be done by the pupils, or whether the first class of pupils shall actually begin the work by cutting out the garments. It will be a loss to the girls both in interest and experience if they do not make the clothes themselves. Every class can take its part in the sewing, each class taking up the work where the last class left off. In this way it should not take more than two days, at the longest, to clothe the doll.

Clothes for the Young Baby.

A baby does not need a lot of expensive, useless things, but only enough to keep it warm, fresh, and dainty.

The clothes should be made by hand rather than purchased ready-made, for clothes made by hand give better value for the money expended, and they will last longer. Inexpensive material may be used, but, of course, goods of better quality wear longer, if they can be afforded. A baby's clothes should be extremely simple, never overtrimmed, and ready when the infant is born.

Necessities for a Baby.

A number of diapers of canton flannel, or from two to four dozen of bird's-eye diapering,
Four flannel bands,
Three wool shirts,
Two flannel skirts,
Two white skirts (these are not necessary at first),
Two or three dresses,
Three night-slips,
One cap and coat,
Two flannel or knitted blankets,
Three pairs long white stockings, for winter.

Soft lawn or nainsook is the best fabric for slips and skirts. The cloth should be washed before being made up to protect the tender skin of the baby from chemicals that may have been used in bleaching the material.

Fig. 10. Wrapper

Fig. 11. Nightgown

It will be necessary to buy paper patterns; the cost is only ten cents each.

Diaper. Eighteen inches wide, one yard makes one diaper; twenty inches wide, ten yards make nine diapers; twenty-four inches wide, four yards make three diapers. Never use rubber diapers.

Band. Three quarters of a yard of flannel for four bands. A small baby wears a flannel or knitted band as a safeguard against rupture, or as a support to its little body, and for warmth. Bands should be made of fine, white flannel.

Bands should be cut, and the goods left with raw edges, so that the bands will stretch, or they may be torn straight across the goods. Make them six inches wide and eighteen inches long. These should be worn only two months.

Shirts. The baby should have at least three all-wool or silk-and-wool shirts.

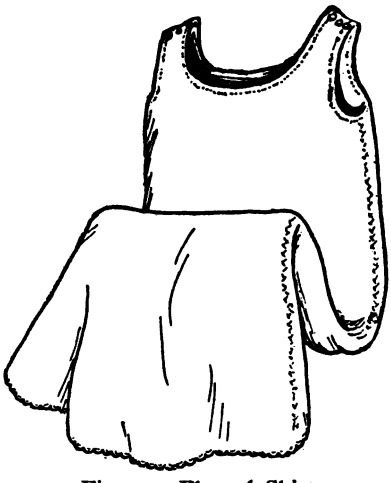


Fig. 12. Flannel Skirt

Merino shirts are the best. Do not get the first size, as the baby outgrows them too soon. The second size will fit for a long time.

Flannel skirts. These should be made to hang from the shoulders, and not with a band to pin around the abdomen. A white skirt is not necessary for a young baby. The flannel skirt should be 27 inches long; if a white skirt is used make it of cambric or nainsook.

Dress. Twenty-seven inches wide goods take two and five-eighths yards; thirty-six inches wide goods take two yards. Dress when finished twenty-seven inches long. Neck should be fastened with tape, not buttoned. See Fig. 13.

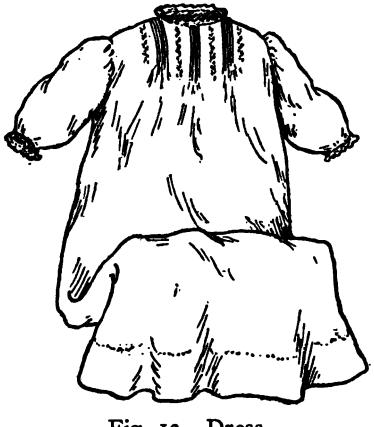


Fig. 13. Dress

Nightgown or night-slip. Twenty-seven inches wide goods two and one-eighths yards. Open in front. See Fig. 11.

A pinning-blanket is not necessary, and it prevents

the baby from using its feet freely.

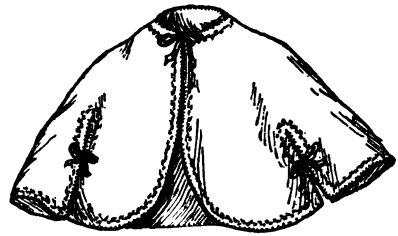


Fig. 14. Flannel Sacque

It is necessary, in winter especially, to protect a baby from draft; a wrapper such as shown on page 98, made of Scotch flannel or outing flannel, is a useful garment for this purpose. A paper pattern can be bought for ten cents. Tie the wrapper at the neck with ribbon to match the flannel.

The flannel sacque as shown in Fig. 14 is worn for the same reason as the wrapper, to protect the baby from draft. The sacque is so simple that no pattern is necessary. Cut the flannel as in Fig. 15, making a hole in the middle for the neck and an opening in the front and at the sides as in the picture. Bind it all around with binding ribbon or work a blanket stitch around the entire edge. Tie together 1 and 1, 2 and 2, 3 and 3, 4 and 4.

Topics to be Discussed while Sewing.

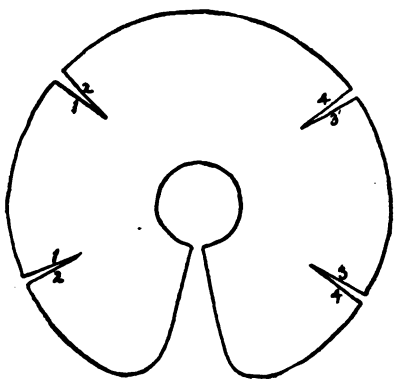


Fig. 15

These lessons on care of a baby are difficult lessons for grown-up people and still more difficult for girls to learn, for there are many facts that must be learned by heart. It is easy to have near us in the kitchen the many receipts for cooking, and if our memory

fails, we have simply to turn to the proper page in the cook-book; but it is not possible to carry about directions how to give a tiny, irresponsible child its best chance for health and happiness. The rules that lead to this every girl must make a part of her spirit and her mind. She must know by heart the right thing to do at the right time. The care of little children is a much more serious occupation than any other. An infant is absolutely helpless, and the entire responsibility for its very life falls on the girl or the mother who has it in charge. While we are sewing the clothes for our make-believe baby, a great many of these important facts about the real baby may be learned. If the baby in your house is sick, the first thing for the girl or the mother to do is to see a doctor or a nurse and find out where the trouble lies. Do not take the advice of neighbors; they mean well, but the advice is often ignorant.

Before proceeding farther on this subject of children, it seems to the author that a tribute should be paid to the big sisters who take much care of the tiny members of the family. This responsibility means constantly sacrificing the playtime of the day, and it means endless patience on the part of these older sisters. But this position of "minding the baby" is taken almost always with a spirit of love and unselfishness — a spirit that is one of the most beautiful things in our city life.

It needs more than love and an unselfish spirit to care for a baby. Every girl must have knowledge, and she must learn to control herself and to control the infant in her charge. It is not enough to know that the baby should not eat candy or suck a comforter; one should see that he does n't. Every girl who takes the responsibility of a little brother or sister must see that rules are obeyed. Let every girl from this day on make this firm resolution:

"As I know the laws of life, I will do all in my power to keep them and to enforce them." This strengthening of the will and this power of control are more important than any other education in the world.

Clothing.

As our minds are on the subject of the child's clothes while our hands are busy working on these garments, it will be natural to begin our talks with the subject of clothing. These facts will be repeated many times in connection with washing the clothes, dressing the baby, etc. Let every pupil who studies this book drop forever from her mind the idea that the important subjects of life are known after once being studied. The remark is constantly made by school-girls, "I studied that," or "I did that last term; I don't see why I need to learn it again." The pupils who are now taking this lesson for the first time, at fifty still will be studying the subject, "How to take care of the baby."

Diapers.

Diapers should be washed every time they are soiled, and dried, if possible, in the sun and open air. Never dry a diaper and use it again without washing. Keep diapers in covered pails until washed; and really soiled diapers should be washed out at once.

Very few clothes are needed by the baby in hot weather; a diaper and a gauze shirt are often enough. More harm is done by putting too many clothes on a baby than by not putting on enough. It is because babies are loved so much and seem so frail to grown-up people and to big sisters that the fear of their taking cold is exaggerated, and so the baby is wrapped up until its body is too warm, and the child finds it hard to use its limbs or

to breathe the fresh air. The body of a tiny child is warmer than the body of old people, and it feels the heat more. The skin wants to breathe, and the air wants a chance to enter the pores of the skin. It is the fresh air that gives life, and yet some babies are wrapped up as if fresh air were a poison and must be kept away from the little lungs.

Perfect circulation is necessary, if a baby is to have rich blood, and good air must enter the lungs, and the clothing must be loose to insure this circulation. Fresh air cannot enter the lungs of any child that has a shawl wrapped around its head or has so many clothes on its tiny body that its lungs cannot expand.

The only way a baby exercises is by screaming, kicking, and squirming. Tight clothes prevent this.

The baby's clothes should be thin, light, and soft, and always without starch in them. They should hang from the shoulders.

For a baby to sleep well, its clothes should be loose. Remember, if an infant is too warm, its sleep will be restless.

A child suffers from wet clothes, but cannot tell of its discomfort. It is for the one in charge of the baby to have such a spirit of thoughtfulness and kindness that she will change those clothes as soon as they become wet or soiled.

Before Birth.

The care of a baby should be started before it is born, and there are many things that even schoolgirls can do to help their mothers in this important event. Of all the babies who die under one year of age, thirty-five per cent. or over one-third, die before they are a month old. Many of these babies die because at birth they are weak

and sickly, and this is due largely to the fact that their mothers did not have proper care during the months before they were born; so that every girl will see that one way to save the life of her baby brother or sister is for her to help the mother as much as possible before the baby is born.

In the first place, more respect should be shown to all women at this time. Very often a woman is irritable when she is carrying her child. This is because she is uncomfortable, and her whole nature feels the discomforts and hardships of life more than at any other time. It is a small part of the burden to take if the children of the family show great patience toward the mother at this time. Remember she is about to give a human life to the world. This is the hardest thing that a woman does, and her children can help her by being considerate and patient. Another way a girl can help is to spare the mother all the steps and all the housework possible, never allowing her to carry the coal or lift any heavy weight, taking from her as much of the cooking, bed-making, cleaning, and care of the house as is practicable.

In many cases the big girls of a family hear more about such institutions as settlements, milk stations, and hospitals than does the mother. It is, therefore, the daughter who will see that her mother has the address of a good trained nurse or a good hospital or the best possible doctor before the time of her confinement. This will relieve the mind of the woman, and will be of great benefit to the tiny baby.

Some of the causes which weaken the mother before the birth of the child are, as has been stated, doing too much heavy work and being overburdened with too many cares. Beside this, improper food, irregular meals, and lack of rest and sleep reduce her strength, and she has

not the proper strength to give the baby who is depending upon her.

Every child has a right to be born healthy. Life is a hard battle, even if we have all the strength that is our due, but it is unfair, if it can be avoided, to start a baby with a weak body. If every schoolgirl feels the crying need that a woman who is bearing a child should be in the best physical, mental, and spiritual condition possible, it will do a great deal to make better men and women in the coming generation. Heredity is what a baby gets from its father or its mother, and environment is the condition under which the child comes into the world, and the condition under which it lives and grows to be a man or a woman. A great deal has been said about heredity, that a baby could not help being this or that because it inherited it from its father or mother; but now we know that environment — that is, conditions over which we have control — have more to do with the life of a child.

The Nursery.

The nursery is the room in which the baby sleeps. This room should be free from all unnecessary articles that collect dust and interfere with the circulation of the air. Even while the class is sewing on the doll's clothes, let it take time to look at the model room that has been selected for a nursery. It is the mother of the house who, in most cases, decides where the children, including the baby, shall sleep; it is she who furnishes the rooms; consequently schoolgirls have little power to carry out individual ideas excepting by suggestion. Every girl has a right to her own ideas and taste, and the chance will come when she can furnish a nursery her way, and in the meantime she can help, and often advise her mother.

The baby's room should be the room that the sun shines

in, if there is such a room in the house. Grown people spend much time at the shop, the factory, the school, or in the street. The baby spends at least three-fourths of every day at home, and it needs the sun to help it grow — surely as much as a flower does. If any big girl makes a crib for her baby brother or sister, she should have only such trimming as can be easily taken off and washed. Even though schoolgirls cannot regulate many things about their parents' house, they can often detect close air in a room when the mother does not notice it. This is because the mother, steadily staying in the house, does not get the contrast which her girls get, who constantly run out into the open air. When the air in the baby's room seems impure, open the window wide for a few moments, taking the baby into another room while you thus change the air of the nursery. If the girls of this class can prevent it, do not dry the diapers in the room where the baby is sleeping; don't cook food there; and it is better not to have the gas burning at night in the nursery.

Your baby does not want too much heat in the room any more than it wants an over amount of clothes. Thermometers do not cost much; make your mother a present of one, and keep it in the nursery. Never let the thermometer go above seventy degrees. If it does, open the window a little from the top and bottom, and let the overheated air out and the fresh air in.

Have the room the baby lives in a bright, pretty room, but not fussy. The baby and its equipment need all the space possible. Nothing is more beautiful than a nursery that in every detail shows that it belongs to a little child. The bed in this nursery should be a crib or a single bed, for a baby should sleep alone, and never with a grown person.

Nursing a Baby.

Again, the pupils of this class may say that this is their mother's business, but for three reasons it is everybody's business to learn about this subject. First, because it makes every one anxious to help a nursing mother so that she can better perform this great obligation to her child. It makes every one respect her and show this respect in every possible way. And, third, this subject is so important that girls should begin to realize it when they are young and when there is time and opportunity to study about these things.

These are a few of the reasons given by the Board of Health in New York City "Why a Mother should nurse her Baby."

1. One death out of every five which occur at all ages is that of a baby under one year of age, and the greatest number of these deaths is in bottle-fed babies.

2. In the city of New York during 1912, 3392 babies under one year of age died from bowel trouble, and *nine* out of every *ten* of these babies were bottle-fed.

3. Mother's milk is the only safe food for a baby during the first six months of its life.

4. Cow's milk or prepared food can never equal breast milk as the proper food for the baby.

5. Breast-fed babies rarely have bowel trouble. Bottle-fed babies rarely escape it, particularly during warm weather.

6. Babies fed on breast milk show the best development; the teeth will appear at the proper time; the muscles and bones will be stronger, and walking will not be delayed.

7. A breast-fed baby is not so likely to have bronchitis or croup, and, if attacked by any disease, has a much better chance of living than a bottle-fed baby.

8. Pneumonia in babies is fatal more often in bottle-fed babies than in breast-fed babies.

There is a great deal that mothers should know about nursing their babies that schoolgirls must learn later, but one fact let every girl know by heart and teach to as many women as she can. A baby must be nursed only at regular intervals and at the same time each day. A doctor, a trained nurse, or any milk station will tell a mother how far apart these intervals should be, and then, no matter how hard the baby cries, no food should be given between times. Remember, when little girls or women give children what they cry for because they cry for it, it shows unkindness and selfishness, and is cruel to the child.

Children's Diseases.

A little knowledge as to the signs of illness is necessary, so that girls can be ready to act in time to prevent serious sickness. If you have not sufficient knowledge to know when the baby is sick, you will not know when to tell your mother to send for the doctor.

The common diseases of children are the following:

Colic. This can be known usually by the sign of pain, hard crying, and drawing up of the feet.

If this happens, get the feet warm, and put a hot flannel on the stomach and rub the stomach gently. No young girl should give medicine. If the pain continues, call at once on some one with experience.

Convulsions. You can recognize a convulsion by a choking sound, spasmodical breathing, stiffness of the body, eyes staring, hands clenched, and mouth firmly shut.

Send for the nearest doctor and while you are waiting for him, put the baby in a hot bath, and, if this does not relieve it, soak the feet in mustard water.

Constipation. This is the responsibility of the older members of the family toward the little children. Small children cannot know the importance of having their bowels move every day and at the same time each day. It is one of the duties of big girls to train their baby brothers and sisters to form this habit of regularity. Begin this training when the baby is only two months old. Buy a small chamber not larger than a pint bowl. Let the mother or sister hold this between her knees and place the baby on the chamber, with its back against her chest and its body firmly supported. Do this twice a day, always at the same hour, after the morning and evening feedings. After the baby has learned to use a chamber at regular times, he is benefited physically; whoever cares for the baby is saved much labor; and, above all, the danger of future constipation is less. Let no girl ever lose sight of the fact that constipation is a fearful danger; the system becomes clogged and finally poisoned, often for no larger reason than that children forget, or are in too much of a hurry, to attend to the cleaning-out of their beautiful, wonderful bodies.

If the children, in spite of care, become constipated, the following simple rules remedy this: see that the baby often has cool boiled water, and make the small children drink at least one glass of water before breakfast, and five or six glasses during the day. Fruit juice is good for little children; fruit for older children. Constipation is occasioned sometimes from eating too much bread and potatoes and not enough green vegetables. If big sisters will feel responsible for the regularity of their little sisters, and keep a few simple rules, they will be doing a great work.

Diarrhea is too frequent movements of the bowels, and comes usually from indigestion; two or three loose move-

ments a day may be the beginning of a serious illness. The baby is sick when it vomits or has diarrhea; it is seriously ill when it has several loose, green passages a day. Stop all food, give cool boiled water, and take the baby to a doctor. Older children often have diarrhea from buying and eating what the little stomach can not digest. Giving a penny to a child to keep it quiet is a cruel act to the child; there is no kindness in it. If the child in your care has diarrhea, there are two things to do: stop all food and keep him quiet. If he is not better in five or six hours, ask a doctor's or the nurse's advice.

Earache. If your baby screams as if with pain, puts his hand to his head, and cries when he is touched, the trouble is often earache. No girl knows enough to treat the ear. Do not even drop oil or hot water in the ear. Put a hot water-bag or a warmed piece of flannel against the ear; but if this does not stop the cries, carry the baby to the dispensary or to the nearest nurse. Nurses do not treat diseases, but they can tell us the very best place to go and how to get there.

Croup. This usually comes to a child at night when it is difficult to get the doctor or nurse at once. Croup begins with a dry, hard cough, and the baby shows difficulty in breathing. While the father, or some one, is getting dressed to go for the doctor, the big sister can do the following things: start the tea-kettle boiling and let it boil in the room with the baby, for the steam helps it to breathe. Also, hot cloths put on the throat may relieve the child. The room should be kept warm. This is all a young girl can do except to keep her head and help the family to keep calm, and get the advice of a doctor or nurse, *not* a neighbor's advice.

Measles begin with sneezing, watery eyes and nose, a cough, and an eruption appearing on the face and neck.

Under these conditions keep the baby warm, out of all drafts, and quiet until the doctor comes. And keep the sick one away from all other children if there is any eruption until you have seen a doctor, as so many diseases are contagious.

Whooping-cough. This also is very contagious. It begins like an ordinary cold, growing more severe as time goes on, until the child begins to "whoop." It is not a dangerous disease, except with tiny babies, but it means suffering and terrible discomfort. Children are apt to vomit when they cough, and this requires much labor and much patience on the part of big sisters.

Mumps is indicated by a swelling beneath the ear and a sore throat. Take the child to a doctor if you fear mumps. It sometimes proves very serious, always painful. An ordinary case is over in nine days.

If a child shows symptoms of serious illness, put him to bed at once. Keep all other children out of the room until the doctor comes. And do not wait until to-morrow to send for the nurse or doctor. *Send at once.*

Don't get irritated at your baby if he seems cross. He may be ill. Look for the following signs: a hot, dry skin means fever. Vomiting means the baby is trying to get rid of something that is n't digesting. If he won't nurse or take his bottle, there is surely something wrong. If he has a cough, find out at once if it is serious.

A cross and fretful baby is usually a sick baby. A well baby sleeps most of the time and is happy when he is awake.

Most children's sicknesses and deaths can be prevented if we big people know what to do, and do it.

Now, I am sure that the doll clothes are finished. Let us lay them on a chair near the fire, and with the doll as our baby we will have a lesson in:

How to Bathe a Baby.

This is not to be talking merely, but really doing the work, except that we shall not put the doll actually into the water.

A baby can have a tub bath after it is ten days old. It should not be bathed for one hour after feeding, and if the room is cold in the morning, bathe the baby just before he is put to bed for the night.

Get everything ready for the bath before undressing the baby. See that the room is warm.

Place the baby on a pillow on the table,— first protecting the pillow with rubber or oilcloth. If the room is cold, have the table near the stove, or have the baby on a blanket over a hot-water bottle.

Have clean clothes on a chair near the stove.

Have plenty of hot water, Castile soap, soft towels, and a piece of cheese-cloth (not a sponge), several cotton swabs, and a glass of clean water to wash out the baby's mouth.

In taking off the clothes, unfasten them and pull them all down over the feet. In undressing a child have a separate place for wet diapers.

Cover the baby with a blanket, then lay a towel over the blanket.

Shake soap in water lightly and wash the face. Never use cold water; it frightens a baby.

Pay special attention to the corners of eyes and ears.

Wash the ears carefully, and in back of the ears. If dirt is found, apply white vaseline to back of ears with cotton swabs, then wash. Twist wash-cloth very finely, and wash inside of the ears.

Rinse the cloth and wash the face all over, then dry it.

Then wash the head, soaping well, and dry very carefully and quickly.

If there are crusts on the head, use vaseline to soften them.

Wash the mouth by wrapping absorbent cotton around the finger, dip the finger in a glass of clean water, clean under the tongue, the roof of the mouth, and around the teeth.

Then clean the nostrils by twisting the wash-cloth.

Be sure the water is warm. It should feel warm on the elbow. As it cools quickly, have the water warmer than you wish for the bath when you first draw it.

Take away towel and blanket. Soap the body before putting the baby in the basin. Do this very gently to avoid frightening the child.

Wash it all over very carefully and thoroughly in the bath.

Take the baby in one hand and the towel in the other and put the baby back on the pillow.

Never lift the baby by its arms. Put one hand under the head and the other hand under the back.

The navel must be kept clean. If necessary, use vaseline.

Dry the baby by patting it with the towel; do not rub it. Give the child a bath every day, and more than one a day can be given in hot weather. This is to cool the baby, more than for cleansing purposes.

Wash the baby, when soiled, every time you change its diapers. Use no soap, only warm water, and dry thoroughly to prevent chafing. Chafing comes always from moisture.

Dressing a Baby.

Keep in mind that no clothing must be tight, and that no common pins can be used. Pull all clothes on over the feet, not over the head.

Have clothes warmed before putting on. Damp clothes might cost the baby its life.

First put on the shirt, and push it up out of the way, so that the band can be put on.

The belly-band is rolled before it is put on, and then unrolled as it is put around the body. Pin just at the side of the middle in front. Never use cheap safety-pins. Stitch the band on or use reliable pins. Be careful when pinning not to stick the baby. Put pins one inch apart. Have the band tight enough to support the abdomen and protect the navel, but not tight enough to cause ridges in the flesh.

Have the blanket always over the baby's legs, and pull skirt down over the band.

Then put on a diaper. Fold the diaper to fit the baby, always diagonally. For older babies, two diapers should be used, and put on in the same way.

Pin the shirt to the diaper, but do not have the diaper too tight; it must be comfortable.

Put the stockings on next and pin them to the diaper.

Sleeping.

After the class has bathed and dressed the baby for the daytime, dress it for the night.

At night all the baby needs is a diaper, belly-band, and nightgown, flannel in winter and nainsook in summer. In winter turn the nightgown up at the bottom, like an envelope, to protect the feet.

As we have learned, it is much better for a baby to sleep alone. Grown people have been known to roll on children during sleep and smother them; and if an infant sleeps with the mother, there is always the temptation to frequent nursing at night.

It is quite important to have a baby's bed in our prac-

tice house. This bed should have a mattress, firm, but soft; a rubber sheet to protect the mattress. A very thin pillow, or none at all, and never a comfortable, but only blankets that can wash.

A tiny, healthy baby should sleep nine-tenths of the time. At six months old, two-thirds of the time.

Never rock a baby to sleep.

Never give it a "pacifier."

Never let a child in your charge stay up after seven o'clock.

The room a child sleeps in should be darkened and quiet. In our crowded homes quiet is hard to secure, but let every big sister try to get a restful sleeping-place for the little members of the family.

When a baby cries at night it is a signal for help. Get up and see that the bedding is smooth, the hands and feet warm, the diaper not soiled or wet, and the baby turned over. Don't take it up, or it will get used to expecting it.

Not only do babies sleep at night, but they take one or two long naps in the daytime. Out of doors is the best place for these naps. Night or day, while a child sleeps, have the window open to admit fresh air.

To Lift a Baby.

Practise on this doll how to lift a baby in the right way. With the right hand grasp clothing below the feet. Slip the left hand beneath the infant's body and head. It is then raised on the left arm, and the entire spine is supported.

How to Give a Baby Air in Bad Weather.

Dress him as if he were going out, and then open all windows. Place the carriage or crib near the window, but not in a draft. Start with a fifteen-minute airing and

increase it to an hour or even more. So long as the baby is out of a draft and away from the dampness, it will do him good. A veil is not necessary if he is n't in a draft, and in the street keep the sun from his eyes rather than use a veil.

Washing a Baby's Clothes.

It would be good practice for the class to wash the doll's clothes. It is a waste of time to wash these clothes before they are soiled, but when they need washing it will be a good lesson to launder them.

A baby's band, shirt, dress, and stockings should be washed every day. No starch, bluing, or soap powders should be used. Especially is this true in washing the diapers, as they might chafe and poison the skin of a small infant.

The flannels have to be washed with care to prevent shrinking. All flannels should be washed and rinsed in tepid water, and let the water be of the same temperature throughout. (See Laundry Lesson.) The flannels should be stretched into shape before being left to dry, and not dried near the fire.

CHAPTER IX

FOOD FOR INFANTS

Note to Teachers.

In placing within the reach of every schoolgirl the simple study of infant feeding we are trying to open the eyes of future mothers to a part of the great science of disease prevention. No girl must feel that the general knowledge taught in this chapter completes the study; but she should have her interest so aroused that when more responsibility is laid upon her she will realize the necessity of getting the special knowledge with which to meet that responsibility.

The way this subject of food should be studied is by a succession of cooking lessons, beginning with the preparation of milk for an infant, and taking up the various kinds of food a child should eat every year, up to the age of five. The work of preparing the food is to be done by the pupils in the class.

It is seldom a lack of love, but often a lack of knowledge, on the part of the home-maker, that compels a child to face life handicapped because of a weak body. Mothers and big sisters must learn that love will not excuse them. "All breaches of the law of health are physical sins." We sin against an irresponsible child when we allow it to eat the wrong food or unclean food, or to eat any food at the wrong time.

This study interests the world, for weak children grow into useless children; and the strength of a child and the value of a citizen depend largely upon the food that is given to the baby when it is too young to select for itself.

Milk.

Milk seems to be all liquid, but in the stomach it becomes partly solid. It has in it every kind of food that a baby requires. It is thirteen parts solid and eighty-seven parts water. The solid parts are fat (or the cream), sugar, proteids (or the curd of the milk), and salts. The fat helps the bones to grow, feeds the nerves, gives heat, and may be stored for future use; the sugar also gives heat; the proteids give growth to the blood cells and the muscles; the salts help the growth of the bones. An infant cannot digest its food without water, nor can it get rid of the waste material. Milk, as we know, is the first food for animals, including human beings; and as it is the only food taken for the first five or six months, it is spoiled if not well prepared. In France, it is against the law to give solid food to children under a year old without a doctor's prescription.

Let every girl begin this lesson with the fact firmly fixed in her mind that during the first three months of a baby's life it needs perfect care, more so than at any future time; a wrong start may mean a long life of suffering, as the life is so delicate and the body unable to resist hurtful things. Bad milk is the easiest way to start the baby wrong, for bad milk is poison to an infant. This danger is one of the chief reasons why mothers are urged to nurse their children, rather than give them cow's milk; for the mother's milk is fresh and pure, whereas, it is almost impossible to get cow's milk that has not been kept at least twenty-four hours. A healthy mother's milk is free from the danger of bacteria, and this means that it is good milk, which means clean milk; bad milk means milk in which the bacteria are multiplying.

Flies in milk-shops are apt to carry and contain more bacteria than those in other food-shops in the same neigh-

borhood. The reason for this is because milk (especially in summer) is an excellent medium for bacteria.

Milk is more easily infected than many other foods, whether flies drink it or fall into it. The same flies that spoil the milk by infection may walk on meat and not poison it.

Remembering these facts, every girl will encourage her mother to nurse her baby if it is possible for her to do so. This study is to help those handicapped babies who must eat from a bottle instead of nursing.

It is often the work of the big sister in the family to regulate the baby's food; this chapter is not, however, intended to teach *what* food should be given to the infant at a certain age, but *how* to prepare any food that is given, so that it may be pure and clean when it reaches the baby's stomach.

There are many things that the big girls in the family can learn about milk. One is to know bad, from good, milk. If you see any sediment or dirt in the bottom of a glass, or in the bottle of milk, do not use the milk; that sediment is dirt and has already begun to poison the milk. But, unfortunately, a great deal of dirty milk looks clean. Bacteria are tiny living things that poison milk. These bacteria microbes are too small for any one to see without a microscope. There are thousands of them in one drop of bad milk, and they increase very rapidly, not only before you give the milk to the baby but after it is in the baby's stomach. All cow's milk contains germs, even when handled carefully; but they may be harmless germs, and if the milk is kept cold they will not increase. Many germs are harmless; some simply make the milk sour, while others produce typhoid fever, diarrhea, and tuberculosis. A single microbe, found in all stables, can in twenty-four hours increase to more than ten billions.

Loose milk is the most likely to have poison bacteria in it. If any girl will stand for fifteen minutes at the door of a grocery, where loose milk is sold, she will see how often the lid of the can is lifted, how many chances the dusty air has to enter, and flies to light on the milk. A fly puts its feet for a few seconds into the milk and flies away, leaving one tiny spot behind, and that spot may increase into millions of microbes. It is, therefore, every girl's duty to advise her mother to buy only bottled milk, and when the big sister goes out to buy (in almost all cases she is the one who markets for the family), she can insist that she will take only bottled milk, for the milk in bottles is kept from contact with hands, insects, and other impurities. Bacteria multiply not only when milk is in a dusty place but even when it is in a warm place.

Having bought the milk in the bottle, as free from germs as possible, take it at once to a clean, cold place until you are ready to use it. The delay in putting the milk in a cold place immediately is often the reason for sour milk. It is so easy for a little girl, after she has purchased it, to let the bottle stand in the sun, near the stove or on the kitchen table, and then make the excuse, "I thought my mother would put it in the ice box." Every girl who purchases milk should feel the responsibility of it until it is put in a clean, cold place and sealed against the air and insect life.

There are many ways of keeping milk sweet and clean, even if you have not an ice-box. For example, take an old pail with a cover, make a hole in the bottom, put a piece of ice in the pail and the milk bottle on the ice. Put the cover on the pail, and throw a clean blanket over the whole. Place this simple ice-box in a dish-pan, so that when the ice drains through the hole in the bottom the water will not go on the floor. Do not forget that

your pail and the blanket over it must be kept scrupulously clean.

There are many things that every girl may learn on this subject, and a few terms with the meaning of which she should make herself familiar.

"Modified milk": to modify milk means to make the cow's milk as nearly like the mother's milk as possible. Mother's milk is very much weaker than cow's milk, or, as the latter is called, "whole milk." For example, there are three times as much protein in cow's milk as in mother's milk; therefore, if you give a little baby four or five days old, milk from the bottle, you cannot give it "whole milk" direct from the cow; it must be weakened so that there will be only one part milk and three parts water. As a baby gets stronger more milk and less water is used, until at last, when the child is nine to twelve months old, it can take the cow's milk without any water.

There are many different ways of preparing or modifying milk: milk and water; barley water and milk; oatmeal and other preparations that doctors may decide are the right food for different children at different ages. The proportions used in these preparations are called "formulas," and any mother or big sister, living in our cities, who wants to know how to feed her baby can find out at a milk station. Take the infant there; it will be weighed and its age asked. The doctor, at the station, will then give the nurse just the "formula" that the baby should have, and the nurse will show the mother how to prepare it. These formulas must be worked out only by a doctor or a trained nurse who has made this a study for years. Modifying milk by these formulas is a work that experts consider so necessary that many cities spend thousands of dollars a year in establishing milk stations and paying baby specialists. The invitation is given to every

mother to call and get the right formulas for her baby. I would advise girls who have charge of little brothers and sisters to visit one of these milk stations, talk with the nurse and learn how the work should be done; if there is no station in your city, take the baby to a nurse or consult a doctor. Don't *guess* at so important a question as the preparation of milk for the baby.

Taking it for granted, therefore, that no girl is going to work out any formula without the help of an experienced person, our lesson will be simply how to do the work after the doctor has given the formula.

Prepare the table as for cooking; cover it with clean, white paper, or a perfectly clean towel or cloth. All the basins, bowls, bottles, and any utensil used for the preparation of milk, should be used for no other purpose.

The articles (which should be on the table before beginning to work) are as follows:

Six feeding bottles. These should be round, not flat, so that they will clean easily, having no inside corners to collect the milk. Feeding bottles are marked with one ounce and half-ounce measurements, which enable any one to use them in place of a measuring glass. They come in different sizes, but an eight-ounce bottle is a good size, for when the baby is small the bottle may be partly filled, and when older it may be used entirely full. Two of these bottles may be bought for five cents. Prepare every morning as many bottles as will be needed during the next twenty-four hours. Put only food enough in each bottle for one feeding.

Have also on the table rubber nipples, with a small hole at the end so that the milk will not rush through into the tiny stomach. These should be of black rubber to pull over the neck of the bottle. A rubber feeding tube must never be used.

A pitcher is needed in which to mix the food. If possible, have this of glass, as germs do not collect on glass as readily as on other material.

A glass funnel, to be used in pouring the milk preparation into the bottles, must be at hand; also corks for the bottles. Absorbent cotton often is used, but corks can be boiled every day and are cheaper. A bottle brush, some bicarbonate of soda, or if that is not convenient, common salt; a fine wire strainer (some use gauze to strain the barley water, but a fine wire strainer is easy to wash and to keep perfectly clean), a saucepan, sugar, a teaspoon, barley (Robinson's preparation is good, but many doctors use ordinary clean store barley), a glass, and a pint bottle of milk.

In teaching this lesson, it is necessary to begin the work as if it were the day before. This we must do in order to learn how to leave the bottles and nipples clean at the end of the day.

After each feeding, bottles and nipples must be rinsed in cold water, and the bottle left filled with cold water (a little bicarbonate of soda may be added), and the nipple placed in a glass of cold water with half a teaspoonful of salt added. Cold water cleans off all the milk, while hot water will sour any milk that has stuck to the bottle or the nipple. Corks in use should stay in a glass of water until the end of the day.

Bottles, corks, and nipples should be thoroughly washed once a day with hot water, soap and soda. Use the brush for the inside of the bottle, and turn the nipple inside out, washing it thoroughly. When nipples are new, boil them for at least ten minutes.

The time has now come to prepare the baby's food. This should be done in the morning, early, and all food needed for the day should be prepared at one time.

When the table is ready be sure that your hands and apron are clean, and that no soiled cloths are hanging over or near the table; remember how sensitive milk is to any microbe.

Take the bottles, corks and nipples (all of which have been made perfectly clean, but not sterilized) and put them in a clean pan of cold water; place them on the stove and allow them to stay there until the water has boiled twenty minutes. Washing bottles is not sufficient; something may stick to the bottle that only boiling will loosen.

The formula given here is a simple milk modification. We will use it only as an example:

Ten ounces milk,
Ten ounces barley water,
Half ounce sugar,

and put up in five 8-ounce bottles.

Take a saucepan, and with three cups of water use two teaspoonfuls barley flour. Put the water on to boil; mix the barley flour with a little cold water, to avoid lumps, and then add it to the saucepan of boiling water. Add a pinch of salt, and boil for twenty minutes.

To sterilize milk, it must be boiled, but this is not necessary if the milk is bottled and certified. Scalded milk only paralyzes any possible germs; it does not kill them.

When the bottles are boiled, pour off the water, but leave the bottles in the saucepan and put the saucepan in a dish-pan of cold water until the bottles are cool.

Take the corks from the water with a spoon, never with the fingers. Take the nipples from the water in the same way.

Now allow the barley water, which has boiled twenty

minutes, to cool while the bottles are cooling; it will cool more quickly if placed in a pan of cold water.

When the barley water, milk and bottles are cooled, pour ten ounces of milk into the glass pitcher. If there is no measuring cup at hand, measure by the extra feeding bottle, filling it full once and then measuring out two ounces more. Dissolve half an ounce, or four teaspoonfuls of sugar in the barley water. If you have lump sugar, not granulated, one lump of sugar is equal to a teaspoonful, so that four lumps will be four teaspoonfuls. Strain this barley water and sugar into the milk.

Now that the milk, barley water, sugar and the pinch of salt are mixed together in the glass pitcher, pour this mixture into the cooled, sterilized bottles. If five bottles are used, put four ounces of this milk-and-water mixture into each bottle. Cork at once and put on the ice.

Before giving the bottle to the baby place the bottle in a saucepan of hot water. Test the milk by putting a drop on your wrist; if it feels warm it is the right temperature. Never touch your lips to the bottle.

If lime water is required, buy it at a drug store. A large amount may be purchased for five cents, and will keep, in a cool place, for three or four weeks. Lime water is not used in place of water, but to make the milk more easily digested. It is also used for babies suffering with colic.

After the milk is in the bottles, it will be the work of the next class to empty it out and rinse bottles, nipples and corks, as directed. Then wash them thoroughly, after which prepare the formula, again leaving the full bottles for the next class.

CHAPTER X

FOOD FOR CHILDREN BETWEEN ONE AND FIVE YEARS OF AGE

Note to Teachers.

The question of "what little children shall eat" cannot be answered in fewer than three or more lessons. The pupils, in order to become familiar with the subject, must cook a number of the following dishes, with the aid of a teacher, in class, and then work out the remaining ones at home.

List of General Foods for Little Children.

Cereals. Made into gruels.

Broths. From beef, mutton, and chicken.

Soups. Milk and vegetable.

Eggs. Coddled, poached, scrambled, custard (never fried).

Meats. Broiled, roasted.

Fish. Broiled, baked, never fried.

Vegetables. Celery, peas, asparagus, potatoes, rice, macaroni, cauliflower, carrots, beans, spinach.

(Learn to prepare the following especially for Children.)

Stewed fruits. Apples, cherries, grapes, raspberries, strawberries, blackberries, dates, figs, prunes, pears, peaches.

Juice of oranges, pineapple, berries of all kinds.

Desserts. Junket, custards, plain-fruit jellies, fruit-juice with gelatine, milk puddings, tapioca pudding.

Food for Children Under Five Years.

There is no subject more important for school children to study than the care of little children, and food is the most important element in that care. The work in the home falls so heavily upon the mother, the cooking and serving the meals take so much of her time, that the responsibility for the younger children of the family is assumed very largely by the older sisters. The very first thing that these older sisters must learn is that the little children must be saved from themselves; that what they want and what they do not want is of no value; decisions must be made by older minds than theirs. The excuse, "He will not do it," or "He will not eat it," or "He wants this," or "He wants that" is a silly excuse for any big sister to give for allowing her little sister or brother to have the wrong thing, or to eat food which she knows is not good for the stomach. A child under eight years of age does not know what is good for him, and will almost invariably choose the wrong thing. If a big sister is not strong enough to make her little charges eat nourishing food, if she has not the power to keep them from eating between meals, then she is not capable of looking after a child.

The work in this lesson is the preparation of food for children after the first year. As we have seen in the last chapter, children under a year live almost entirely on milk. They have no teeth and cannot chew food, neither has the stomach the juices to digest food, other than milk. Before beginning the preparation of these foods for children, over a year old, let us take up a few of the rules of life that grown-up people must learn and must teach little children, in order that the body will be in condition to turn the food into fuel. In the stove lesson no coal

was put into the stove until the stove was cleaned and in perfect working order.

Sleep.

Sleep is an absolute necessity to life, and the amount of time a child spends in sleep, and the regularity with which it takes these rests, have a great deal to do with its health. Children under three years of age should sleep twelve hours every night, and besides this should take a nap in the daytime. Not only does the body need rest, but also the heart, the lungs, and the stomach. These organs all work at night, but they do not work so hard as in the daytime. The eyes need rest, too, and all the nerves of the body need to be absolutely quiet for at least half of the twenty-four hours. Even if a child is able to live with little sleep, and even if he looks healthy as a baby, that child will not be so intelligent a man or so big a man, if he does not have his right amount of sleep. There is no use to feed a tired body; it is like piling coal into a worn-out stove.

Air.

A little child of two or three years of age has no idea how much air should be in the room when he goes to bed; this must be decided by the big sister if she is taking care of the little one. If you put your little sister to bed in an overheated, close room, she will wake up in the morning more exhausted than when she went to bed, and will lose all the feeling of refreshment which should come after a night's sleep. One sign of this will be that she will want no breakfast. The food that a child eats at night is not given a chance to digest if that child sleeps in a close room. The waste matter is not

thrown off, the system is clogged and the child feels heavy, and has no appetite.

Exercise.

Playing and running about is the way that children exercise, and this exercise is absolutely necessary for digestion. But one thing that a big girl, when she is playing with a little one, must remember is that the exercise must not be violent. A walk across the room is a long journey for a baby, and a walk a block long is a long journey for a small child. It is sometimes difficult for a grown-up girl to realize how very delicate the muscles and nervous strength of a child are; if these are overstrained, if the play is too violent it may weaken the heart of the little sister for her whole life, for the heart will pump hard and try to keep the body going. I have often seen big girls pull little ones by the arm, to make them hurry. Remember that children cannot hurry, and it is as cruel to try to make them walk upstairs fast as it would be to make a big girl run five miles.

Bathing.

One fact about children is that they never seem to want to be clean, especially little boys who object even to having their hands and faces washed, and to taking a bath unless it means a swim in the river. So this part of their daily life must be decided by some one who knows better than they do.

In "Practical Home-making" we learned that a skin which is not clean becomes inactive, and often diseased. It certainly would be a cruel thing to let a child's skin get into an unhealthy condition before the age when he is responsible. The entire body of a child must be washed with warm water, at least once a day, to keep the

skin active. Do not put food into a dirty body; the waste matter, from the pores of the skin, must be washed away.

Teeth.

Every one wishes to be as good-looking as he can be, and there is nothing that makes a man or a woman uglier than bad teeth. It is extremely cruel not to care for the teeth of a little child, and to neglect them in childhood means expense later on, and very often at a time when money is most needed for other things. It also means indigestion and malnutrition, that is, the food cannot nourish the body unless the teeth are in condition to do their part. Brush a child's teeth every morning and every night; take it for granted that he will never want them brushed, that he will cry and do everything he can to make you omit this morning and evening duty. Later on, he will thank you, if you are faithful. Good, firm teeth prepare the food by chewing and breaking it thoroughly apart. Remember this is the reason why we have teeth.

Habits.

A child comes into the world with no habits, either good or bad, and his life later on is decided by what habits are formed in childhood. A great responsibility in the care of a child is to make him form good, rather than bad, habits.

One of these habits is the habit of liking the right, rather than the wrong, food; this is accomplished by never giving the child any wrong food. If you hear a child crying for tea and refusing milk, it is because his mother or big sister has given him the former and created in him a taste for the stimulating, rather than

the nourishing, drink. Another habit that must be formed in a child is getting rid of the waste matter of his body at a regular time every morning. As you learned in another chapter with infants, this is done by teaching the baby of a few weeks old regular habits, and later on by making the older child go to the closet at the same hour every morning, whether he wants to or not. The habit of going to bed early is formed in the same way. If you let a child go to bed one night at seven o'clock and the next night at ten o'clock, and when he does n't feel sleepy allow him to sit up until the grown people go to bed, how can that child understand that he should go to sleep at a regular hour?

Food.

It is a very common error for grown-up people to think that children can eat "what is on the table." The child sees certain foods that are served three times a day, and naturally asks for them, often by loud cries. It is estimated that one-half of the cases of illness among children are the result of eating this grown-up food; not wrong for people who have their growth but wrong for a child.

In the first place, the child lacks the strong teeth to masticate the food. The juices of the stomach in a child are very different from those in a grown-up; the stomach and intestines are small and tender, as is the child itself. No girl would expect her baby brother of three to carry up the coal or scrub the floor, as her mother and father do. Why should she expect that his stomach can do their kind of work?

A child not only should be prevented from eating the wrong food, but he must eat the right food. We big people must know how much waste and water there is in

each food,— what foods build tissue, what kind furnish heat, which contain minerals to purify the blood. People in very cold countries eat foods that contribute heat. Old people eat foods that repair waste. To our children we give much of the food that contains protein, for that makes muscle and tissue and provides the elements needed for the growing body. Never think again that all ages can be fed and treated alike. The growing boy eats twice as much food as his grandmother, for she eats only to provide heat and to repair the waste of the tissue; he eats to increase the weight and height of his body. The old people feel cold when the children in the same atmosphere are too warm. That is because the circulation is slow in the former and quick and healthy in the child; just as a fresh fire gives out more heat than a low, partly burnt-out fire. Human life is a wonderful study. Make it such by knowing a great deal about it.

The right diet for a child must be well-balanced. That is, it must contain the right proportion of proteins for tissue building, these we find in such foods as meat, eggs, milk. The diet must contain a right quantity of carbohydrates and fats, as in potatoes, sugar, oil, butter. These give the energy that makes the child run and exercise, and keep his body warm. The vegetables give largely the mineral salts, besides water and some nourishment.

But you cannot give large quantities of food hoping to make your child grow faster, for if you do the waste increases more rapidly than the body can throw it off, and the result is suffering and illness. When food is not digested it is like a poison in the body.

To make our children strong it is necessary to use animal food as an important part of the diet; in the form of milk, eggs, and gruels for very little children, and eggs and fresh meats for older children.

The fact that the starch in the potato is easily digested makes the potato a good food for very small children, but do not suppose that a baked potato is a complete meal. It is not sufficient, unless in combination with bread and butter, and milk; when the child gets older a chop or some meat should be given with the potato. Do not give potato every day; substitute macaroni or spaghetti. There is much nourishment in macaroni; it gives every class of food except the fat. (Add oil for this.)

Dr. Rotch, a man who knows a great deal about what children should eat, divides the child's life into four periods. The first period is the first year of the baby's existence, and in that time, as we have learned, he lives on milk. The second period is from one year to thirty months old, and in these months of the child's life it is very necessary to have variety in the food, always remembering that the foods given must contribute to its growth. The child is still a baby, and its chief diet is milk, but this may be varied with fruit-juices, broth, gruel, white potato, and after eighteen months, an egg. Increase the quantity of the food only as fast as the stomach of the child can digest it. The third period begins when the child is two and a half years old, and it then begins to eat vegetables, such as fresh squash and peas. It may have more kinds of fruit, but always cooked fruit, not raw. It also must have more protein, and we will add this element by beginning to give the child a little bacon or scraped meat. Then, when the child is three years old it may have such meats as chicken, mutton chop, roast beef and beefsteak, but these should be cut into very small pieces, with a little salt added, but no pepper. When a child is three years old it is well to give meat one day and an egg the next. A child eats eggs before it eats meat, that is, a child can have eggs when it is a

year and a half old, but it should not have meat until it is three years old.

Dr. Thompson is another doctor who knows a great deal about feeding little children, and he gives the following general rules:

"1. Allow time for meals.

"2. See that the food is thoroughly masticated.

"3. Do not allow nibbling between meals.

"4. Do not tempt the child with the sight of rich and indigestible foods.

"5. Do not force the child to eat against its will, but examine the mouth, which may be sore from coming teeth, and examine the food, which may not be properly cooked or flavored. If good food is refused from peevishness merely, remove it, and do not offer it again before the next meal-time.

"6. In acute illness, reduce and dilute the food at once.

"7. In very hot weather give about one-fourth or one-third less food, and offer more water."

Preparation of Food.

Gruel. The great point in making cereal gruel is to cook it thoroughly. Oatmeal, farina, barley, hominy, and rice are the best cereals to use. Receipt, page 227.

Until the child is four years of age milk forms the chief part of the diet, but after the first year it is used much in combination with other things.

Put milk in soups, in puddings, in gruel, and give a child dried bread and milk if he says he is hungry.

Never give a child really cold milk; warm the milk a little for an infant under two.

Never let any one, when overheated, drink cold milk. Milk is a food, not a drink.

Never give a child an egg until you have tested it.

(See page 165.) Fried eggs and omelets are not good for children. Soft-boiled eggs are the most digestible. Page 165.

Fruits. After a child is a year old we must know how to prepare for it, orange juice, stewed prunes, and apples. Page 222.

The utensils used in preparing food for a child should be scrupulously clean. If possible, keep separate for this cooking a saucepan, a double boiler and the few other needed utensils.

Two or three teaspoonsful of olive oil served with food each day is very healthy.

The following are suggestions for the diet for little children. (All of the receipts for these suggestions are in the back of this book.)

Division of Child Hygiene.

Diet for Child from Twelfth to Eighteenth Month

FIRST MEAL, ON RISING

(1) Two to three tbls. of juice of a sweet orange, or juice of six stewed prunes, or two tbls. of pineapple juice.

(2) One cup milk with either zwieback, or dried out bread.

Note: Fruit must be given either half an hour before or half an hour after milk.

SECOND MEAL — DURING MORNING

Milk alone or with zwieback.

NOON MEAL

(1) Small cup of meat soup or broth.

(2) Dried bread may be added to the above.

Note: Soup may be made of chicken, beef or mutton.

FOURTH MEAL — AFTERNOON

Milk or zwieback and milk.

EVENING MEAL

(1) One half cup thick gruel mixed with one half cup of milk, from top of bottle. Taken with zwieback.

Total milk in twenty-four hours, one quart.

Note: Eight ounces is equal to a half pint.

Diet for Child from Eighteenth to Twenty-fourth Month

BREAKFAST

(1) Juice of one sweet orange, or strained pulp of six stewed prunes, or pineapple juice, two tbls.

(2) A cereal, such as cream of wheat, oatmeal, farina or hominy with top milk salted. Page 164. A glass of milk and dried bread.

FORENOON

A glass of milk with zwieback, or dried bread.

(This is better than crackers for a very little child.)

DINNER

(1) Broth or soup made of beef, mutton or chicken, and thickened with peas, farina, sago or rice, or occasionally.

Beef juice with dried bread, or clear vegetable soup with yolk of egg, or

Egg soft boiled, with bread, or the egg poached, with a glass of milk.

(2) Dessert: apple sauce, prune pulp, or junket.

Do not give milk at dinner if beef juice is supplied.

(A child can often digest junket when its stomach will not retain milk.)

SUPPER

• Glass of warm milk, with zwieback and custard or stewed fruit.

Total milk in twenty-four hours, one quart.

Diet for Child from Two to Three Years

BREAKFAST

(1) Juice of one sweet orange, or pulp of six stewed prunes, or a little pineapple juice, or apple sauce.

(2) A cereal, such as oatmeal, farina, cream of wheat, hominy or rice, slightly sweetened or salted, as preferred, with the addition of top milk. Or

A soft boiled or poached egg with dried bread or toast.

(3) A glass of milk.

Note: Milk and raw fruit-juice must not be given at the same time.

DINNER

(1) Broth or soup made of chicken, mutton, or beef, thickened with arrowroot, spaghetti, rice or with the addition of the yolk of egg or toast squares.

(2) Scraped beef or white meat of chicken or boiled fish, never fried (small amount), and mixed with mashed or baked potato. Fresh peas or spinach, or carrots may be given, but must first be pressed through a sieve.

(3) Dessert: apple sauce, baked apple, rice pudding, junket, custard.

SUPPER

(1) A cereal or egg (if egg has not been taken with breakfast), with stale bread or toast. Corn bread with milk or with cocoa or bread and custard.

Never give a child under three meat every day; alternate with eggs; alternate potato with macaroni.

(2) Stewed fruit.

Diet for Child from Three to Six Years

BREAKFAST

(1) Fruits: an orange, apple, pear or stewed prunes.

(2) Cereal: oatmeal, hominy, rice or wheat preparations, well cooked and salted, with thin cream and sugar, or

Egg: soft boiled, poached, or scrambled.

(3) Milk or cocoa.

DINNER

(1) Meat: chicken or beefsteak, or roast beef, or lamb chops, or fish.

(2) Vegetables: spinach or carrots or string beans, peas, cauliflower-tops, mashed or baked potatoes, beets or lettuce (without vinegar) or macaroni, or spaghetti. Bread and butter (not fresh bread or rolls).

(3) Dessert: custard, rice, bread or tapioca pudding. Home-made ice cream (once a week), corn-starch pudding (chocolate or other flavor), stewed prunes or baked apple.

Never give a child bought ice cream, the milk of which it is made may not be fresh; the freezer may not have been clean; nor can one know exactly from what the flavoring is made. Don't give candy.

SUPPER

(1) Milk toast or Graham crackers and milk. Or a thick soup, such as pea, or cream of celery, with bread and butter. Or a cereal and thin cream with bread and butter.

(2) Stewed fruit; custard or plain pudding; jam or jelly (homemade).

CHAPTER XI

A HOT WEATHER LESSON

Note to Teachers.

The first piece of work in this chapter covers the subject of packing away winter clothes for the summer months. The children should be able actually to do this work. It is explained in full, and much benefit will be lost if the pupils only talk about it and do not actually pack the clothing into a box.

The second object lesson is the preparation of picnic luncheons: taking into consideration the best food to be carried in hot weather, the sanitary preparation of that food, and working out how to get the greatest amount of nourishment in a small space, for example, how to make the filling of the sandwiches supply the food value needed for a meal.

Hot weather has to be faced every year, and the majority of people are not prepared to meet it. Not enough importance is attached in this country to climatic changes. In India, for example, where the thermometer is seldom below 80 degrees, clothing, food, hours for labor, are studied with a view to preserving health and comfort in spite of the heat. In most parts of the United States we have only a few weeks of really warm weather, but we endure this rather than meet it with forethought and intelligence that come from education on the subject. The person who really desires to make the summer free from discomfort often does not know how.

Air.

One of the great advantages of summer is that fresh air has the opportunity to enter our homes, as it has not in

the cold weather. Doors and windows are wide open night and day, and there is little danger of breathing exhausted air. Every person should make the most of this. Sleep with every window in the house wide open; insist upon fresh air in the store or office or factory; spend all of the recreation-time possible in the open air. To ride in an open car or on top of a stage or on a ferry-boat; to read on a park bench instead of in the house; to use the roof for reading or working — are all perfectly possible open-air city pleasures. Remember that summer is the only season in the year when we can live under open-air conditions. It is much better for a girl to spend her money in trolley fare or for the short railroad journey that will take her to the country than it is to spend that same amount of money for a hat with a feather on it.

Summer Furnishing.

There are three reasons why warm clothing, dust-collecting table-covers, curtains, ornaments, etc., should be put away in hot weather.

First. They create a feeling of stuffiness and irritation. Every one is more sensitive to disorder, to the overcrowding of a room, and to dirt, in hot weather than in cold. Nerves are on edge, and the vitality that in cold weather can laugh at the discomfort of disorder and crowded quarters is lacking in summer. Things press against us when we are suffering from the heat. Give the rooms in summer an atmosphere of space.

Second. Curtains, table-covers, etc., collect dust when the windows are open, and add to labor and to the danger of disease germs.

Third. A crowded room takes away from the free circulation of air, and in summer we must have all the air possible.

Packing Away for Hot Weather.

First, get a wooden box. Any grocery store will have one and will take it to your house for a few cents. A box the length of the window and thirty-seven inches high makes a good window-seat as well as packing-box. Scrub this box thoroughly inside and out with soap and soda and hot water. When dry, paint the inside cracks with turpentine. Five cents' worth of turpentine and a small brush will do the work. Stain the outside of the box, including the cover, with alcohol stain and wax.

To make stain. Mix with alcohol enough dry aniline stain to make the required color.

After the stain has dried thoroughly, rub off with a cloth the powdery remains of the stain which have not passed into the wood. Wax with melted beeswax or with any prepared floor wax. Hinges are seldom found on these grocery-store boxes, but such hinges can be purchased from any hardware store for ten cents.

When the box is cleaned, stained, and the cover hinged, line it with newspaper, having the paper overlap so that there are no cracks between. Shake, brush, and air thoroughly every article of clothing or other material that is to be packed. Then fold carefully, and place in the box, with newspaper between each separate article. When the box is full, cover with a newspaper, tucking in so that no air can reach the clothing. Fasten the cover on tight, and do not open until autumn.

Mosquitoes.

Mosquitoes in tropical countries are the carriers of malaria and yellow fever, and are the one channel through which persons are infected with these diseases. The Panama Canal, because of the prevalence of yellow fever in the Canal Zone, could never have been built had it not

been for the discovery that these fever poisons are carried from one person to another by the bite of a mosquito. In 1880, the French started to build the canal, but were obliged to give it up because the prevalence of the fevers made labor impossible. It was through the acts of brave men, among them Dr. Carroll and Dr. Lazaer, that the fact was proved that these tiny insects were dangerous. These men allowed mosquitoes that had bitten yellow-fever patients to bite them, and in every case the disease was contracted. Dr. Lazaer studied the mosquito as it lit on his hand and drank his blood. Three days later he came down with yellow fever, and died, but his death proved that the mosquito must go. Havana has been free from yellow fever since 1902 because a man called Wm. C. Gorgas got rid of mosquitoes.

Mosquitoes breed in damp places and in stagnant water. When the United States was ready to build the canal and it was decided that either the mosquito must go or the canal remain unbuilt, the first thing that was done in Panama and Colon was to install a perfect system of sewers and to pave the streets. This did away with the filth and the mud that had existed up to that time. As mosquitoes also breed in damp undergrowth, this was cleared away, swamps were drained, and stagnant pools were oiled. It was not possible at once absolutely to exterminate the disease, but as soon as any one showed signs of yellow fever, he was put into a screened room, and an officer was put on duty day and night to see that the screen door was always closed and that no mosquitoes in the room could possibly fly out. As soon as the case was over, the house was fumigated and all mosquitoes were killed.

This drainage and sanitary work cost our country over nine millions of dollars and the lives of many valuable

men, but the discovery that the mosquito was a disease carrier was worth the lives of these scientists and doctors, and to clean up this one little spot in the world was worth all it cost. It is facts like these that make us respect the word "sanitation." The one man who was at the head of all this cleaning-up work was Colonel Gorgas, and what that man did in a big way each girl can do in a small way. He stands simply as the greatest house-cleaner that ever lived. He made perfectly clean and healthy the place that was given him to clean, and that is all that is expected of any one.

Flies.

Flies are another danger of the summer months. A fly carries both in and on its body the filth and bacteria from the substances on which it feeds. The house fly is a disease-carrier not because it infects people by its bite, as the mosquito does, but because it eats and lives and lays its eggs in infected material. Dead animals and excreta are its principal food. But if your house and the near-by street have no filth or disease bacteria exposed for the fly to feed on, it is a harmless, though annoying, insect. If one does not like the thought that the fly now walking around the edge of the cream-jug was a short time ago eating and walking on a dead fish, sour milk, the garbage-pail, or even in more disgusting filth, the only thing to do is to keep all such feeding-places covered.

The body of the fly is thickly covered with tiny hairs, its legs are like little brushes, and the dirt and germs stick to this hairy body. It is estimated that a fly can carry about infected bacteria on its legs and wings for at least eighteen hours. Not only do flies carry germs, but they also drop this dirty material from their body after they have eaten it. The fly always overeats, and it

overeats decayed material, which it prefers to fresh food. This overeating causes a distension of the body, and in order to relieve this feeling, the fly drops the undigested food as it moves from object to object. The girls who study this book may have noticed that when a fly falls into the milk it will leave a trail as it crawls out. These trails are the droppings from the intestines and the mouth. They have been studied and proved to be often infected. Every girl has also seen fly-spots where the fly has walked. These spots are the same things: little drops of dirt, which are quite as likely to be dropped on the food you are about to eat as anywhere. Flies feed on sputum, and when this sputum has dried to such an extent that the fly cannot draw it into its mouth, it will inject fluid and moisten in this way the dried sputum, so that it can be sucked in.

The dirty habits of the fly are also conspicuous from the places in which it lays its eggs. Some flies prefer the wounds of animals, in which cases extensive sores are the result. Some will lay their eggs in the dirt of the street. A certain kind of fly will lay its eggs only in cheese, bacon, or some fatty material. As the common house fly does not pierce the skin, it cannot carry poison to the blood, but a fly will light on our skin again and again so that it may feed on the skin secretions. The danger from a fly lies, then, in the fact that they breed in dirty, infected places, and that they return to these places to feed and then light on the food of human beings. You may never see the fly that poisons you or that makes your baby sick, for all that is necessary is that the hairy little body shall walk over filth and then light on the meat or milk that you buy, possibly a day later. But the germ has been left, and when taken into your stomach will begin its poisonous work.

Intestinal diseases are those most often given by the fly to human beings. This is because of the matter that the fly eats. Diarrhea in summer is the most common of these diseases. A single fly can carry on its body 6,600,000 bacteria, and in one examination in England between the months of July and October, twenty per cent. of the flies were found to be infected with diarrhea germs.

A fly does not move much from street to street or from house to house. So if the house you live in and the street you live on are clean, you are safe. The amount of dirt carried by flies, measured in terms of bacteria, accords with the habits of the people and the condition of the street near which that fly lives.

What is our part in this question? Flies *will* walk in filth if there is any filth to walk in. That is a habit we cannot control in flies, but the milk and food in your house can be covered so that the dirty feet of the fly cannot touch what you eat. Garbage-cans, ash-cans, and any waste for which you are responsible can be covered, and so made impossible for the fly to use as a feeding place. The windows can be screened. A screen costs only twenty-five cents, and the purchase of this may save the baby's life. A screen is also necessary to keep the mosquitoes away. In this country mosquitoes are not the deadly carriers of disease that they are in the tropics, but they do poison many people, they heat the blood, and they certainly annoy and rob one of sleep. A net over the bed in summer will keep both mosquitoes and flies away. Do not shut the windows to keep insects out when a screen will do the same work. Do not forget that just as uncovered garbage is a breeding-place for flies, so stagnant water, even only a small quantity of water in a pail, will act as a breeding-place for mosquitoes.

Those who study this book cannot go to Panama or

give their lives to help science, but every one can take the rules that these great scientists have discovered, can learn them by heart, and can live by them day by day, and every girl can clean up her little corner or her one house, just as Colonel Gorgas did his larger house-cleaning.

Foods.

Food is to the body what coal is to the stove, and as no one builds a big fire in the stove on a warm summer day if it can be helped, so no one should overheat the body in hot weather. One-fourth to one-third less food is needed in hot weather than in cold, and not only is the quantity of the food different but the quality is also different. The foods such as meat, oil, butter, sugar, that contain carbohydrate, fat and protein, create heat in the body. Proteins and carbohydrates are quick fuels. For example, if energy is wanted quickly one may obtain this by giving the body eggs or sugar. It is well to remember this fact when one is tempted to buy candy in hot weather. The desire for candy in summer is not a healthy taste; it often means that one has n't much appetite and the energy of the body is getting low.

To produce heat slowly in the body, and a heat that will last, as a hard coal fire outlasts a wood fire, we should eat oils, nuts and fat meats. It is for this reason that in cold countries, on all Polar expeditions, the men eat great quantities of fat, but this heat-giving food must be avoided in summer.

Cooling foods are the foods that contain much water. There is a constant loss of moisture from our bodies in summer as there is loss of heat in winter. In hot weather, therefore, we must eat food that makes up for this water loss, just as in winter we must eat food that gives back the loss of heat. Water is as cooling to the

inside of the body as the cold bath is to the outside. Eat uncooked vegetables such as celery and lettuce; such fruits as pears, peaches and oranges, these being largely composed of water; but when you eat this uncooked food be very careful of two things: that it is fresh and clean, for food decays very rapidly in hot weather. Never eat any fruit or vegetable or salad without washing it thoroughly.

Freshly cooked vegetables, such as peas and beans, contain much nourishment and in summer they are better to eat than meat. Do not give the stomach a great deal of work to do in hot weather. Eggs are more easily digested than fat meats.

Eat foods in summer that require a short time to cook, and in the morning cook the food necessary for the day, thus allowing the fire to go out and insuring a cool house to sleep in. Let us be thoughtful of the servant in hot weather; she suffers from the heat as truly as her employer. A supper of cold meat, crisp cool salad, cold milk and bread and butter is surely more appetizing than a steaming hot dish for the workers of the family to come home to at night.

Buying in Summer.

One reason for the increase in disease in warm weather is bad food. Every girl in this class knows that to keep food from decaying in summer it must be put on the ice; in winter the cold weather takes the place of the ice-box.

In winter most people are obliged to eat canned vegetables, which never have the sweetness of the fresh vegetables. Do not open a can of peas in July because it is easier than shelling the fresh, and equally cheap, peas from the market. In buying vegetables, remember that they must be crisp. Lettuce that is not crisp is not fresh.

If possible, buy fruit with the skins on. Never buy pineapple or watermelon by the slice, as the dust and germs from the street have entered every piece.

Sweet, syrupy drinks do not take the place of water, as the sugar in soft drinks is heating, and clear water is much better and more cooling. Our bodies cry out for moisture because of the great loss of water from the pores of our skin.

Let each girl seriously take up the problem of hot weather living. The death rate of children is much greater in summer than in winter. This increase lies in the danger from decaying food, because fermentation is quickened by the heat. The man who sells you fresh vegetables from a cart may be perfectly honest when he tells you they were fresh that morning. They may have been, but in summer a few hours are all that are needed to produce decay. Then, too, there is more dust in summer than in winter. Our windows are open, and the dust easily enters our homes. In summer, housewives require more will power to dust properly every morning and get rid of dust. Flies and mosquitoes infect the food in summer, and the overheated bodies of little children easily furnish lodgment for disease.

The care of little children has been taken up in another lesson, but while we are on this subject let us go over a few absolutely necessary facts about helping the baby during the summer.

The baby should never be weaned in hot weather, but if it takes cow's milk, the milk must be kept in a cool place and covered.

Milk which has been heated by the sun or by hot air, or has been too near the stove, is bad milk.

A baby feels the heat more than grown-up people; in hot weather it should wear as little clothing as possible.

A loose cotton shirt and a diaper is sufficient for a hot day.

In warm weather give the baby a cool sponge bath several times a day, and give it plenty of clean, cool boiled water to drink; never forget that it gets thirsty and is unable to ask for water.

If the baby vomits or has diarrhea, stop all feeding. Give it boiled water, and send for the doctor at once. If the doctor is not near get a district nurse.

Picnics.

While many people think picnics are only childish things and not important enough for a school study, we believe they are worth studying for two reasons.

First — They are held out of doors; and to eat in the fresh air gives the body the best possible medicine.

Second — A great many people who, at home, are very particular about meals think anything will do for a picnic. On the contrary, cold food that is to take the place of a hot meal should be prepared with even more care if possible than the meal at home. It is usually eaten in a warm atmosphere after being carried some distance.

Every girl can recall how many children come home from picnics (which should mean health, relaxation and amusement) sick at their stomachs. Why? Because they either eat the wrong food, or the right food prepared in the wrong way, and as soon as the stomach feels the motion of the ferry or the car it rebels at the insult. For it is an insult to our stomachs to fill them with unwholesome food.

What should be taken on a picnic? Sandwiches, fruit and something to drink. Sandwiches should be the main part of the lunch. In a sandwich we have the bread which every one wants at a meal; bread contains the

necessary starch; butter contributes the fat, and a proper filling adds to the nourishment. In making sandwiches very little butter should be used in summer, for it is apt to get rancid, and fat is heating. The filling of the sandwiches must contain as much food value as possible, and whether it consists of meat or salad or cheese it is the most convenient way to carry the main part of the meal.

Making Sandwiches.

Have your hands clean when you make them, for they must be handled. Bread a day old is better than fresh bread. Have the filling very cold.

As sandwiches are usually eaten in hot weather and away from ice; they should be done up in oiled paper to keep out the air and to preserve them from spoiling. Germs are very active in warm weather. Sandwiches should not be of that material which easily decays. Meat is expensive, and quickly spoils in a warm place, so it is well, when possible, to select a substitute for meat.

Quarter lb. of cheese contains the same nourishment as 1 qt. of milk.

Quarter lb. of cheese twice as much as ¼ lb. of meat.

Two eggs are equal to ¼ lb. of meat.

Nuts are only 5 per cent. water and the remaining .95 per cent. is nourishing.

Thirty walnuts (without shells) contain as much fat as ¾ lb. of meat.

There is much nutritive value in olive oil.

From sandwiches made from salad plants, such as lettuce, chicory, cucumber, etc., we do not get much nourishment apart from the oil and bread, but we do get refreshment, water and salts. This is true also of celery.

Vegetables, fish, cut fruit and meat make good sandwiches, but will not keep long away from the ice.

Salad oil becomes rancid if kept in a warm place for any length of time.

All these facts should help a girl to decide what kind of sandwiches should be taken on a picnic.

As a rule, cold food is not so appetizing as hot food (I am not speaking of iced dishes), and hence great care should be taken to make every sandwich dainty, even though it seems fussy and unnecessary at the time. All should be the same shape and size, and the edges cut even with a sharp knife.

To Make a Sandwich.

Prepare the material that you are to put in the sandwich.

Have oiled or tissue paper ready (if the sandwich is to be taken away).

Cut the bread in slices one quarter of an inch thick. Butter with soft butter (mash if butter is hard). If very dainty sandwiches are desired, cut off the crust, but remember that the crust cut off is just so much food value wasted.

Spread filling on one slice of bread and place the other evenly on top. Wrap in the paper before bread dries.

For at least two lessons the pupils should select sandwich receipts from the back of the book (page 229) and prepare them in class.

Remember that knives and forks are not usually at hand when sandwiches are eaten. Anything of fibrous texture must be chopped fine, as eating with the fingers is unattractive if the food is not very dainty.

Never use anything excepting oiled or tissue paper for wrapping the sandwich. *Never use newspaper.* There are people who are so careless and have so little thought for health that they will use a dirty, inky newspaper to

wrap about a luncheon. Newspapers are made from dirty rags; the printer's ink used on the type is black, greasy oil (rub it off on your hands and see for yourself). After the newspaper is printed it is carried by boys who handle it with dirty hands and throw it about anywhere.

After one or two lessons on hot weather food and the preparation of a picnic luncheon, the subject will become familiar to every pupil in the class. For the last lesson on this topic it would be instructive and interesting for each girl to bring from home what she considers the best luncheon for one person, prepared and wrapped in the best way. All such luncheons may be placed on the table, without names attached, and the teacher will criticize all errors, taking into account food values, daintiness of appearance and manner of wrapping, and give a reward for the best luncheon, not forgetting to give every girl credit for the efforts made.

INEXPENSIVE COOKING RECEIPTS

CONTENTS OF COOKING RECEIPTS

	PAGE
Weights and Measures	158
Cereals	161
Eggs	165
Soups	168
Soups for Children	173
Fish	175
Fish for Children	178
Inexpensive Meat Dishes	179
Baked Meat Dishes	183
Vegetables	188
Cheese	193
Muffins, Breads, etc.	195
Sauces	200
Salads	202
Cold Desserts	206
Baked Puddings and Pies	209
Pudding Sauces	214
Cake	216
Cooked and Preserved Fruits	220
Fruits for Children	222
Receipts for Marmalade, Jam and Jelly	224
Receipts for the Sick	227
Sandwiches	229
Italian Receipts	232
Kosher Receipts	235

Useful Weights and Measures.

32 tbsp. in a pound of butter
2 cups in a pound of butter
5-cent loaf of bread cuts 18 pieces
4 cups of flour to 1 pound.
2 cups of sugar to 1 pound
2⅓ cups dry beans to 1 pound
2⅔ cups brown sugar to 1 pound
2½ cups oatmeal to 1 pound
2⅔ cups corn meal to 1 pound
1⅞ cups rice to 1 pound
4⅓ cups coffee to 1 pound
2 cups chopped meat to 1 pound
3 tsp. in 1 tbsp.
16 tbsp. in 1 cup
2 cups farina in one package
2 cups farina in one pound
1 pint of rice in 1 pound

Table of Proportions.

1 cup liquid to 3 cups flour for bread
1 cup liquid to 2 cups flour for muffins
1 cup liquid to 1 cup flour for batters
2 teaspoons soda to 1 pint sour milk
1 teaspoon soda to 1 cup molasses
¼ teaspoon salt to 4 cups custard
2 teaspoons salt to 4 cups water
¼ teaspoon salt to 1 cup white sauce
⅛ teaspoon pepper to 1 cup white sauce
½ pint or 1 cup is 8 ounces of milk
32 ounces in 1 qt. of milk
2 tbls. in one ounce

All receipts in this book take it for granted that when the terms teaspoon and tablespoon or "tsp." and "tbls." are used, *level* teaspoon and *level* tablespoon shall be understood.

Time Table for Roasting Meats.

Beef — 15 minutes to the pound
Lamb — 20 minutes to the pound.
Pork — one half hour to the pound
Veal — one half hour to the pound.
Chicken — 20 minutes to the pound
Turkey — 20 minutes to the pound

Time Table for Baking.

Fish — 15 minutes to the pound.
Bread — 45 to 60 minutes.
Cookies — about 10 minutes.
Thin Cake — 15 to 30 minutes.
Loaf Cake — 40 to 60 minutes.
Indian Pudding — 3 hours or more.
Bread Pudding — 45 minutes.
Pies — 30 to 45 minutes.
Scalloped Dishes — 20 to 30 minutes.
Baked Beans — 5 to 7 hours.

AFTER THE COOKING LESSON

CEREALS

Cereals include wheat, oats, rye, barley, Indian corn, and rice.

In "Practical Homemaking" the subject of cereals was taken up quite thoroughly. In Chapter VI, in that book, was given the time table for cooking breakfast cereals. As the nutritive value of cereals is very high, it seems important that every girl should be familiar with as many ways of cooking this nourishing food as possible, and the following cereal receipts are added to those already learned.

Things to Remember About Cooking Cereals.

1. It is better not to eat cereals at all than to eat them undercooked.

2. Have the cereal stiff enough to be chewed. If too soft it is swallowed without being chewed and is, therefore, not easily digested. Infant food is different.

3. It is a good rule to cook cereals twice as long as directed on the package.

Suggestions for Serving Cereals.

1. Berries, applesauce, sliced peaches or sliced bananas can be served in the same saucer with any cereal and it makes a very appetizing dish.

2. Figs or dates, cut in small pieces, may be stirred into cooked farina or mush before serving, and the mush then served with cream and sugar. This contains enough nourishment for an entire meal.

Hominy Mush with Prunes

Pour slowly one cup of hominy into four cups of boiling water, salt, and boil one hour.

Wash and pick over one-half pound prunes. Soak these in cold water two hours, then cook in same water until soft. When nearly cooked, add one-half cup sugar. Pour prunes over hominy and serve hot.

Rice and Cheese

1 cup rice	¼ lb. cheese
3 cups water	1 tsp. salt
2 cups white sauce	A little pepper

Boil rice as in previous receipt and add white sauce. Fill a pudding dish with this cooked rice. Cover with fine shavings of cheese, and bake until brown.

Boiled Rice

Boiled rice is not an easy dish to prepare. A very careful study of the subject is therefore necessary.

1 cup rice 3 cups water

1 tsp. salt

Put water in a saucepan and let it boil. Pick over and wash the rice in four or five waters. When water is boiling rapidly, drop in rice so slowly that it will not stop the boiling of the water. If the grains settle on the bottom stir them gently with a fork, not with a spoon. Allow rice to boil from twenty to thirty minutes in a covered saucepan. Add salt when rice is nearly cooked. Turn into a strainer and drain thoroughly. Dry in a serving dish in the oven for a few moments before serving.

Old rice absorbs more water than new rice and takes longer for cooking.

Cornmeal and Syrup

One cup cornmeal to six cups boiling salted water. Cook in double boiler for three hours, add more water if necessary. Serve hot with maple syrup.

Samp

Samp is but four cents a pound and makes a delicious vegetable.

Soak two cups of samp over night. In the morning drain, and pour cold water over the samp in order to remove the starchy substance. Then boil in enough salted water to cover for from three to four hours. If the water boils away add more. Drain all water from samp, and when dry add two tablespoons of butter and a little salt; serve hot.

Hominy Pudding

Cook one cup of hominy in four cups of boiling salted water for one and one-half hours. Drain and let stand until partly cool, then mix hominy with one-half pint of milk, two beaten eggs, 1 tablespoon butter. Bake in pudding dish in oven for about ten minutes. Cheese can be sprinkled on top of hominy before baking, if desired.

Rice Croquettes

Warm one pint of cooked rice in one or two tablespoonfuls of hot milk. Add the beaten yolk of one egg, and salt to taste. Allow this rice mixture to cool, then shape it in rolls and fry in hot lard or deep fat of any kind.

Cereals for Children

All starchy foods, among them cereals, should be cooked long enough to be easily digested. The starch must be liberated by the bursting of the granules. This

starch is changed into a substance called dextrine if it is cooked in a very high temperature and a very long time. If starch is eaten by a child before it is changed, it is not easily digested. It is for this reason that such emphasis is laid on the necessity of cooking cereal a long time. Imperfectly cooked cereals are worse than nothing for little children.

Cereals for Children Under Three.

Cook in boiling salted water for at least three hours. Strain and mix with milk or thin cream. Season with salt but no sugar.

EGGS

There are four reasons why raw eggs are given to the sick.

1. They contain much food value.
2. They are easy to eat.
3. They are easily digested when raw or soft cooked.
4. They are free from bacteria.

How to Tell if an Egg is Fresh.

1. Observe the shell. A fresh egg has a thick rough shell.

2. Drop the egg into cold water. If it sinks it is fresh. If it floats it is stale.

Care of Eggs.

1. Wash the eggs with a damp cloth when they first come from the store.

2. Keep the eggs in a cool, dry place.

3. Never throw away the shells of eggs, as they may be used to clear coffee.

Receipts for Eggs.

Soft-Boiled Eggs

Put water in a saucepan. Let it come to the boiling point. Lower the eggs into it with a spoon. Remove at once from the fire and let stand, covered, for about ten minutes.

Eggs in a Nest

Separate the white of an egg from the yolk. Beat the white stiff and dry. Put it in a cup or small dish, mak-

ing in the top of it a hollow the size of the yolk. Into this hollow slip the yolk. Set bowl in a covered saucepan containing boiling water. Cook until the top of the white of the egg is firm.

Goldenrod Eggs

1 cup white sauce — 6 slices toast
4 eggs boiled hard

Separate the whites from the yolks of the hard boiled eggs. Cut the whites into rather small pieces and add to the well-seasoned white sauce. Press the yolks of the eggs through a strainer or potato ricer. Serve white of egg and white sauce on toast with the riced yolks sprinkled on top. A little parsley around the dish adds to the taste and the appearance.

Creamed Eggs

1 cup white sauce — 4 hard boiled eggs
2 tbsp. grated cheese

Remove the shells of the eggs and cut in cubes. Place eggs in a baking dish and pour over them the white sauce. Sprinkle a little grated cheese on top and serve very hot. If the eggs have cooled in the preparation, place the dish in the oven for a few moments before serving.

Scrambled Eggs

4 eggs — ½ tsp. salt
¼ cup milk — A little pepper

Heat frying pan. Melt butter in it. Beat the eggs, whites and yolks together. Add milk, salt and pepper. (Water can be used instead of milk.) Be sure that the frying pan is very hot before eggs are poured in.

Stir eggs and scrape from bottom constantly while cooking. As soon as eggs are creamy take from fire and serve.

Poached Eggs

Break eggs carefully one at a time into a saucer and slip into a frying pan of hot salted water. Dip the hot water over the yolks with a spoon while the egg is cooking. When the white is firm, take up the eggs with a skimmer, and serve on hot buttered toast. Sprinkle over each egg a little salt and a little paprika.

Eggs in Spanish Style

1 cup tomato	4 hard boiled eggs
½ green pepper	2 tbls. butter or oil
1 tbsp. chopped onion	Salt and pepper
Parsley	

Cut eggs in half lengthwise; separate yolks from whites. Put yolks in a bowl and mix with salt, pepper and a little olive oil. Put the yolk mixture back in whites of eggs. Make hot tomato sauce (see pg. 200). Pour sauce over eggs: heat through and serve hot.

Omelet

Beat eggs, whites and yolks together, with a teaspoon of milk (or water) for each egg. Season with salt and paprika. Turn the beaten egg into a very hot pan which has in it enough butter to just cover the bottom of pan. Constantly run a silver knife under omelet as it begins to harden, allowing uncooked egg to flow under. When all is of a creamy consistency fold and serve at once on hot platter.

SOUPS

Cream of Tomato Soup

1½ cups milk	1½ cups tomato
3 tbsp. flour	½ tsp. salt
3 tbsp. butter	¼ tsp. soda

Little sugar

Melt butter, stir in flour. Add the tomato, stirring constantly. Add the soda to this tomato mixture. Have milk scalded and add milk to tomato until they are thoroughly blended and the mixture thickens. Add the seasoning before taking from the stove. Serve with croutons. Strain before serving soup.

To make croutons, cut stale bread into one-third inch slices, cut off the crusts. Spread thinly with butter. Cut slices into cubes. Place in a pan in oven and allow to get a delicate brown.

Fish Chowder

1 lb. fresh fish (cod or haddock)	1½ pt. milk
3 large potatoes	3 water crackers
1 large onion	Pepper, salt and ¼ lb. pork

Cut fish, potatoes and onion into slices. Try out pork and fry onion in it until a light brown. Place in alternate layers in saucepan — first potatoes, then fish, then pork and onions. Dust with salt and pepper and continue in this order until all the materials are used. Cover the whole with boiling water and let the mixture simmer for thirty minutes. Scald the milk. Arrange the fish mixture in dish, cover with softened crackers and pour over the whole the hot milk.

Vegetable Soup with Meat

1 lb. soup meat
2 carrots
4 or 5 potatoes (cut in squares)
½ cup tomato
1 onion (chopped)
Small stalk celery (chopped)
2 cents' worth soup greens
½ cup rice
Pepper and salt to taste

Put meat in cold water. Let it come to the boiling point and cook one-half hour. Take meat from water, cut in small pieces and return to the pot, adding more water, also the chopped carrot and celery. Boil twenty minutes. Wash the rice, and add this and the potato to the soup, with seasoning and chopped soup greens. Cook all together for twenty minutes more.

Scotch Broth

1 lb. lean beef and bones
1 cup dried green peas (washed and picked over)
½ cup barley
1 potato
Little chopped cabbage
2 cents' worth soup greens.

Soak peas over night. In the morning drain and cook in fresh water with meat, bones and barley for one hour. Add chopped cabbage, potato and seasoning. Cook for one hour more, or until peas are soft.

Vegetable Soup with Spaghetti

1 cup cabbage, chopped
4 potatoes cut in cubes
½ lb. spaghetti
1 onion
½ cup carrot
1 cup tomato
2 tbsp. lard or oil
2 cents' worth soup greens
Salt and pepper to taste

Fry onion in fat until brown. Add this to one quart of boiling water, with cabbage, tomato and carrot. Cook one-half hour, then add potato, spaghetti and chopped soup greens, and cook one-half hour more. Season with salt and pepper.

Tripe Soup

½ lb. tripe
2 cups milk
2 cups cut up potatoes
2 tbsp. flour
2 tbsp. lard or dripping
1 onion
½ tsp. salt
⅛ tsp. pepper

Wash tripe and boil with sliced onion and cut up potatoes for one-half hour. Melt fat and mix with flour. Scald milk and add to this the flour, fat and tripe mixture; season, and let it all boil together until it begins to thicken.

Lentil Soup

1 lb. lentils
1 cup tomatoes
Soup greens
2 tbsp. lard, oil, or drippings
1 onion
Salt and pepper to taste

Soak lentils over night. Allow them to cook in the morning for two hours. Fry onions in oil or drippings until brown. Add to this onion mixture tomato and seasoning. Cook one-half hour with soup greens, which have been chopped. Now add tomato mixture to lentils and boil all together for fifteen minutes.

Clam Chowder (without Tomato)

25 clams
1 onion
Small piece salt pork
3 potatoes
½ tsp. salt
1 tbsp. butter
2 tbsp. flour
2 cups milk
½ tsp. pepper

Boil the clams in their own liquor for three minutes. Remove clams and return liquor to fire. Fry pork, cut in slices, and chopped onion together until both are brown. Add flour, stir, and allow flour to get well cooked. Then add this to clam liquor and season with salt and pepper. Have potatoes cut into dice, and cook in clam liquor until tender. When ready to serve add milk and clams, which have been chopped.

Corn Soup

1 can corn
½ pt. boiling water
1 pt. milk
1 slice onion
2 tbsp. butter
2 tbsp. flour
1 tsp. salt
Pinch pepper

Cook corn and water together for twenty minutes. Scald milk with chopped onion, and add milk to corn. Add butter and flour which have been cooked together. Season with salt and pepper.

Celery Soup

Cut stalks and leaves of one large head of celery in one-half-inch pieces and add to one quart of boiling water. Boil until tender. Make white sauce of one tablespoon flour, one tablespoon butter, two cups of milk, and salt. Press the cooked celery through a sieve. Add this celery to the white stock and heat thoroughly before serving.

Mock Bisque

2 cups tomatoes
2 tsp. sugar
4 cups milk
½ tsp. salt
Sprig of parsley
½ onion
2 tbsp. butter
6 cloves
⅛ tsp. pepper
1 bay leaf
½ tsp. soda

Scald milk with chopped parsley and the bay leaf. Remove bay leaf after milk scalds. Cook the tomato, onion, cloves, and sugar together; add soda and press through a sieve. Add this tomato mixture to the milk mixture, adding at the last the salt, pepper, and butter.

THE PREPARATION OF SOUPS FOR CHILDREN

Beef Juice

Buy one-half pound lean beef. Take off all fat and gristle. Broil over a clear fire from six to eight minutes. Cut the meat into small pieces and squeeze out juice with a lemon squeezer (being sure it is perfectly clean). Add salt. When you are ready to warm this juice do not heat it directly over the fire but put it in a cup and set the cup in hot water.

Beef Broth

Buy chopped lean beef and use one pound of meat to one quart of water. (If the child is over three, one onion can be used.) Soak the meat in cold salted water (with or without the onion) for from two to six hours, keeping it on ice or in a cool place all the time. Then in the same water let it slowly simmer on the stove for three hours. Cool over night. Remove the fat in the morning. Keep this broth covered in a cold place until needed, when it is reheated.

Clear Vegetable Soup

One hour before beef broth or stock is cooked, add any vegetables desired. First wash, scrape, and cut into pieces. Just before soup is done add the salt. Take from fire, strain all through a fine sieve into an earthen bowl. Let it cool without covering. When ready to serve remove the grease, add more salt, and heat.

Mutton Broth

Buy one pound of the best end of the neck of mutton.

Cover with one quart of cold water, add pinch of salt and one tablespoon of crushed barley. Let it stand at the back of the stove one hour. Then move it forward and let it simmer for three hours. Add water so that it will not fall below one-half pint. Strain and allow to cool. When cold remove the fat, adding more salt if necessary.

This can be thickened with a little cornstarch; cook for ten minutes, and then add three ounces of milk to one-half pint of broth.

Chicken Broth

Cut up a fowl into small pieces. Take out all skin and fat. Cover with cold water and let it simmer for six hours. Cool over night. Take the fat off that has risen to the top. Season, strain off the broth, and heat. A four-pound chicken will make one quart of broth.

A little cornstarch, flour, or arrowroot may be used to thicken the soup.

Cream Soups

Cream soups (which are very good for little children) can be made of any vegetables; asparagus, green peas, string beans, spinach, and celery being especially good. All of these vegetable soups are made in the same way. The vegetable is boiled until soft, and is then pressed through a sieve. A white sauce is made of one tablespoon of butter, one tablespoon of flour, a very little pepper, salt enough to season, and two cups of milk, or one cup of milk and one cup of beef or chicken broth. In the place of white sauce, two teaspoons of cornstarch may be used as thickening. Add the strained vegetable to the milk, replace on the fire, and allow it to simmer for a few minutes.

FISH

Codfish Hash

¼ lb. salt codfish
6 medium-sized potatoes
½ cup milk
2 tbsp. butter

Parboil codfish for fifteen or twenty minutes. Pick it over, taking out all bone or skin. Boil and mash potatoes, and add them to the fish. Add also the butter, and enough milk to make it a soft mass. Beat well, and season with salt and pepper. Put into the oven to brown or put into buttered frying pan, and cook on top of the stove without stirring, until brown underneath. Fold and serve.

Fish Balls

½ lb. salt codfish
2 heaping cups potatoes (cut in small pieces)
1 egg
½ tbsp. butter

Boil and mash the potatoes. While they are cooking, cover the codfish with boiling water. Let it soak for twenty minutes. Drain and pick fish into shreds. Mix the fish, potatoes, butter and beaten eggs together. Beat the mixture well. Make into round cakes and fry in a buttered pan or deep fat.

Shredded Codfish Balls

1 box shredded codfish
6 potatoes
2 eggs
1 tbsp. butter.
Salt and pepper

Soak codfish well and pick over. Put into saucepan and cover with cold water. Let it come to the boiling point, but do not boil it as that would make it hard. Strain water from fish. Put potatoes on to boil, cutting them in small pieces so that they will boil quickly, and at the same time put on the fire one and one-half pounds of lard in a deep kettle. This lard must be very hot before it can be used to fry the fishballs. Beat the eggs stiff, the whites and yolks separately. Mash the potatoes and mix with the butter. No milk should be used, but the potatoes and butter should be beaten until creamy. Add potatoes to fish. Mix fish and potato mixture and yolks of eggs together, beating hard. The last thing beat in the whites. Mold with a spoon, not with the hands, and drop in the hot fat. Cook until a nice brown.

Baked Fish

Bluefish, weak fish, or any whole fish can be used for baking.

1 cup cracker crumbs, or bread crumbs
¼ lb. fat salt pork
½ tsp. salt
⅛ tsp. pepper
1 tbsp. chopped onion
1 tbsp. capers
1 tbsp. pickle
¼ cup melted butter

Clean fish, and wipe thoroughly outside and in with cloth wrung out of cold water. Make a stuffing of the above ingredients, that is, bread crumbs, onion, parsley, capers, pickles, butter and seasoning. Mix these thoroughly together. Put the stuffing in the cavity of the fish and sew up the opening with clean coarse thread. Rub the fish thoroughly on both sides with butter and pepper and salt. Cut gashes across the sides of the fish about two inches apart, and in these put tiny strips

of fat salt pork. Dredge the whole with flour. Put in baking dish, with small pieces of pork placed on the back, and bake about ten minutes to the pound, basting frequently with the pork which will melt into the baking fish. When nicely brown serve on platter, with pieces of parsley, sliced lemon and, if desired, hard boiled eggs around the dish.

A Good Way to Cook Fish

1 slice fresh codfish (about 1 lb.)	1 onion
	2 tbsp. butter
1 carrot	Salt
1 turnip	Paprika or pepper

Cut up the carrot, turnip and onion. Boil these vegetables gently, and when they are half boiled, drain and put into a stew pan or casserole with butter, one cup of vegetable water, parsley and seasoning. When these vegetables are nearly cooked add the fish, and cook until tender.

Baked Halibut with Tomato Sauce

2 lbs. halibut	½ tbsp. sugar
2 cups tomato	3 tbsp. butter
1 cup water	3 tbsp. flour
1 slice onion	¾ tsp. salt
3 cloves	⅛ tsp. pepper

Cook the tomato with onion, cloves and sugar for twenty minutes. Mix butter and flour and stir into hot tomato mixture. Add salt and pepper. Cook for ten minutes and strain. Clean fish, wipe, put into baking pan and pour around it half the sauce. Bake thirty-five minutes, basting often. Remove to hot platter, pour around it the remaining sauce, and garnish with parsley. Add boiling water to the sauce if it is too thick.

Codfish Pudding

½ lb. dried codfish
4 good-sized potatoes
2 tbsp. butter
2 cups milk
2 tbsp. flour

Soak the codfish over night. Throw away the water in which the codfish was soaked. Boil in fresh water for one hour. Boil and then mash the potatoes. Take the bones out of the codfish and mix fish and potatoes together. Make white sauce of the butter, milk and flour. Add fish mixture to white sauce. Put in a baking dish and brown in the oven with crumbs on top.

HOW TO COOK FISH FOR CHILDREN

Fish is an excellent food for children if it is absolutely fresh. It is nourishing and more easily digested than meat. As soon as the fish comes from the market it should be scaled, skinned, washed and put into a cool place at once. If the flesh of fish is not firm and hard it is not fresh. Never fry the fish for children, but boil, bake or broil it. In broiling fish, turn the flesh side to the fire first and then the skin side. Be very careful not to scorch the skin side. Fish for children can be served plain or with a milk sauce.

Milk Sauce for Fish

To white sauce add the well-beaten yolk of an egg. Do not add egg until you have taken the sauce from the fire.

INEXPENSIVE MEAT DISHES

Casserole of Meat and Rice

2 cups cooked rice
1 lb. meat (chopped)
1 egg
1 onion
2 tbsp. bread crumbs
¾ cup boiling water
1 tsp. salt
Dash of pepper
1 tsp. celery salt
1 tsp. parsley

Mix meat, rice and seasoning together with chopped onion and parsley. Beat egg stiff and add to meat mixture. Put this in a baking dish, sprinkle bread crumbs on top and cover. Bake in oven at least thirty minutes.

Beef Stew

2 lbs. upper part of shin of beef with bone
3 qts. boiling water
1 turnip
2 carrots
4 tbls. flour
2 onions
3 potatoes
1 tsp. salt
1 tsp. pepper

Have meat cut in one and one-half inch pieces. Wipe the meat and bone with a damp cloth, and sprinkle meat with salt and flour. Put fat from meat in a hot frying pan and try out. Add the meat to this fat, turning it often until it is well browned. Then put the meat into a soup kettle with the bones and seasoning and boiling water, rinsing out your frying pan with some of the water and pouring the contents into the soup kettle so that none of the good of the meat will be wasted. Let the meat boil hard for five minutes, then set the kettle

back on the stove and allow it to simmer slowly for two hours. Prepare vegetables by peeling and cutting them into one inch cubes. Add these to meat and allow them to cook thoroughly. Peel and cut potatoes in cubes and add them to the soup kettle about twenty minutes before serving.

Mince Meat on Toast

Use leftover meat, remove gristle and chop meat fine. Moisten with gravy and season with salt, pepper and celery salt. Put a little fat or butter in frying pan and when very hot add chopped meat and heat quickly, stirring so that it will not stick to the bottom of the pan. When thoroughly hot, serve on slices of hot buttered toast.

Pigs in Clover

Cut bacon very thin. Cut calves' liver about one-fourth inch thick. Drop the liver into water below boiling temperature and let it remain a few minutes to cook. Roll each piece of liver in a slice of bacon, holding bacon together with a toothpick. Cook in hot fat until a light brown. This is much improved when served on hot toast.

Hamburg Steak

1 lb. chuck steak
1 tbsp. butter
1 onion
1 tsp. salt
⅛ tsp. pepper

Chop meat and onion together (every one should have her own meat grinder and grind her own meat). Season meat with pepper and salt. Make into firm balls, sear in butter. Turn balls often and serve rare. Chopped parsley and lemon juice may be added. ¼ cup water.

Plain Stew

1 lb. breast of veal or lamb
1 qt. water
1 tbsp. butter
1 tsp. salt
⅛ tsp. pepper
1 onion
1 carrot
1 turnip
2 potatoes

Gravy: 1 tbsp. flour, 2 tbsp. water

Cut meat in small pieces. Put in saucepan with salt, pepper and cold water or stock. Raise slowly to simmering point, and keep there until tender (two or three hours). Cut vegetables into small pieces, brown them in butter and add them to the stew, twenty minutes before serving add potatoes which have been peeled and cut into squares. Before taking from fire add the thickening made of flour and water. Boil hard for ten minutes after flour is added.

A Good Way to Use Leftover Meat

1 cup leftover meat, chopped
1 green pepper
½ cup tomato
½ cup rice, boiled

Put in the center of a baking dish a mixture of the meat, chopped green pepper, tomato, pepper and salt. Cover this meat mixture with the rice and bake in a hot oven.

Corned Beef Hash

2 cups corned beef
2 cups potatoes
1 tsp. salt
½ cup milk
2 tbsp. butter
⅛ tsp. pepper

Drop corned beef into boiling water and simmer, allowing thirty minutes to the pound. When cold chop meat, but not too fine. Chop cold cooked potatoes, also

not too fine. Mix corned beef and potato together. Butter the bottom of a pan. Put in the corned beef and potato mixture. Over the top put the seasoning and the butter. Pour the milk over the whole and put the pan in the oven. Let it remain there for a half hour, stirring the first ten minutes. If brown hash is desired, reserve half of the butter, and after the second stirring melt the butter and pour on top. Let the mixture remain in the oven without stirring until it is brown.

BAKED MEAT DISHES

Hot Pot

1 lb. of shoulder of beef cut up into 2 inch squares
4 potatoes sliced thin
1 onion cut up fine.

In a deep dish, which has first been well buttered, place a layer of meat. Sprinkle with salt and pepper. Over this sprinkle one-half the onion then a layer of potatoes and a little butter. Repeat this, having a thick layer of potatoes on top to brown nicely. Moisten with water in a covered dish and bake two hours in rather a slow oven.

Braised Beef

3 lb. of beef from lower part of round or face of rump
2 thin slices of fat salt pork
½ tsp. peppercorns
3 cloves
¼ cup each of carrots, turnips, onions, celery (cut these in dice)
A little salt, pepper and one bay leaf

Try out pork and remove scraps. Wipe meat and sprinkle with salt and pepper, dredge with flour and brown entire surface in pork fat. Place in deep granite pan or in earthen pudding dish and surround with vegetables, peppercorns and three cups of boiling water. Cover closely and bake four hours in very slow oven, basting every half hour and turn after the second hour. Throughout, the liquid should be kept below the boiling

point. Serve with brown sauce made from the liquid in pan.

Beef Croquettes

Chop very fine two cupfuls of roasted or boiled beef. Fry one teaspoonful of chopped onion and one tablespoonful of butter until a light brown, then add the chopped meat and one teaspoonful of chopped parsley. Now add one cupful of mashed potatoes, season with pepper and salt, stir in, the last thing, two eggs well beaten. Form into croquettes, dip in egg then in crumbs and fry in hot fat.

Stuffed Spare Rib

1 whole spare rib cracked in the middle
4 apples
¼ lb. raisins

Wipe meat with damp cloth. Slice apples, seed raisins, place apples and raisins on half of spare rib and fold balance over. Tie together (or sew). Put it on rack in roasting pan and into hot oven. After ten minutes or after the outside is seared reduce temperature of oven and put a little water in the pan with which to baste the roast occasionally. Cook three hours, serve with the gravy made in the pan.

Meat Pie

For meat pie it is not necessary to have always the same things. Leftover meat is needed and

1 cup flour
2 tsp. baking powder
½ tsp. salt
½ tbls. lard
¼ cup milk (or milk and water)
½ tbsl. butter

Cut up meat, add any left over vegetables that may be on hand. A little gravy or stock that may be left from

the day before will add richness. Season with salt, pepper and a little celery salt and cover with a crust made after the receipt of baking powder biscuits.

It is fully as necessary to learn how to put left over materials together in an appetizing way without a receipt as to be able to follow a receipt book perfectly. This art comes with practice, by tasting frequently while preparing the dish; and it comes also by an appreciation of the value of every scrap of left over food and thus saving many dollars during the year.

Crust of meat pie

Mix and sift flour, salt and baking powder. Cut in lard and butter. Add milk, mixing with knife. Bake in oven until dough is thoroughly cooked.

Cannelon of Beef

2 lbs. of beef from top of round
1 tbls. of fine chopped parsley
1 tsp. salt, 1 of onion juice and ¼ tsp. of mace.
1 egg beaten.
⅓ cup soft bread crumbs
¼ tsp. pepper

Put meat through the chopper several times. Add seasoning, the beaten egg, and the bread crumbs (which have been soaked and wrung dry). Mix thoroughly and shape in a roll. Bake for thirty or forty minutes. Baste frequently with fat from salt pork and hot water. Serve with tomato or mushroom sauce, or with macaroni and tomato sauce.

Chops — Lamb or Mutton

Chops should never be fried, always broiled over or under a hot fire. The broiler should be turned very often. A good plan is to turn the broiler every time you

count ten. When the meat is puffy it is done. If you cook the chops too long they will be hard and dry. What we want to do in cooking a chop is to sear the outside at once. Thus the juices are shut in. It is the steam shut into the chop that gives it the puffy look. It should not take more than eight or ten minutes to broil a chop. If your chop is two inches thick it is better than when thinner, as the thicker meat will be more juicy. Before broiling, trim off the fat and wipe with a damp, clean cloth. Be sure that the fire is lively, and not one that has begun to cool.

Beef Kidney Stew

Soak kidneys in salt and water for half an hour. Melt two tablespoonfuls of butter in a casserole. Add to butter a small onion chopped fine and the kidneys, which have been salted, add pepper, and dredge with flour. Then add two-thirds cup of hot water and slice of lemon. Cook ten minutes.

Cottage Pie

1 cup left over meat
1 cup gravy
1 cup mashed potatoes
½ green pepper
1 onion
Salt and pepper

Chop onion and pepper, mix it with meat and gravy and season with salt and pepper. Line baking dish with potato and put meat mixture in the middle. Spread lightly over the top more mashed potato. Let the whole bake in oven until the top of potato is a good brown.

A Good Gravy to Use with Leftover Meats

½ cup soup stock
1 tbsp. flour
1 tbsp. butter or drippings
Little salt and pepper
½ tsp. minced onion, or green pepper, or both

Melt fat, add flour and cool for about three minutes. Add soup stock and onion, and bring to the boiling point. Add the seasoning the last thing.

Potato with Meat Gravy

2 cups freshly boiled potatoes
½ lb. meat
2 onions
1 tbsp. flour
½ cup canned tomatoes

Mash the potatoes and season with pepper and salt. Put meat in cold water and allow it to boil until tender. Take out the meat and chop fine or put through meat grinder. Make a gravy of the stock, in which the meat was boiled, by adding onion, fried in drippings, and tomatoes and flour. To this gravy add the chopped meat. Have the mashed potatoes very hot and serve by pouring the meat gravy over the potatoes.

VEGETABLES

In "Practical Homemaking" we learned a great deal about potatoes, but as they are one of the chief foods there is much more to add.

Why is potato so valuable a food?

1. It is easy to cultivate.
2. It can be kept through the winter.
3. It is easy to prepare as a food.
4. Potatoes give us the needed bulk rather than any large amount of nutritive value. Potatoes lack protein so potatoes should be used with meat or fish or eggs or in combination with milk and cheese. Potatoes are cheaper when bought by the quantity, and as they keep well, should not be purchased in small amounts unless necessary.

Potatoes keep best in cold dry cellars; in barrels or in bins. When the sprouts appear on potatoes they should always be removed, as these sprouts spoil the potato.

How to Buy Potatoes

Select potatoes with smooth skins, and have the sizes as even as possible.

Baked Creamed Potatoes

Take left over potatoes, cut in squares and mix with a white sauce; be sure that potatoes are well seasoned. Butter a baking dish, put in the creamed potatoes. Cover the whole with buttered bread crumbs and bake until crumbs are brown. Half the quantity of bread crumbs and half grated cheese will make this dish more nourishing and, to many people, more appetizing.

Another Creamed Potatoes with Cheese

4 cups cold boiled potatoes cut in small squares or chopped
1 pt. white sauce
¼ lb. store cheese cut into small pieces.

Heat the potatoes in the white sauce. Add the cheese and cook all together until cheese is well melted.

Potato Pancake

Take seven or eight good-sized potatoes, pare and grate raw. Drain through a cheesecloth to remove the brown water that gathers on them. Then turn the grated potato into a dish and pour over them a pint of boiling hot milk (this whitens the potato again). Salt to taste, add two beaten eggs, mold and fry in hot lard until a nice brown.

Do not squeeze the potato through the cloth. Only let the brown water run through.

Baked Beans

One quart pea beans. Cover with cold water and soak over night. In the morning drain, cover with fresh water and boil on top of the stove at least two hours. Put beans in bean pot with a small piece of fat salt pork. Mix one teaspoon of salt, four tablespoons of molasses. Pour enough of the bean water over the beans to moisten them. Cover the bean pot, put in oven, and bake for about one hour.

If beans are baked over night it is not necessary to boil them first, cover with boiling water before baking.

Baked Corn

1 can corn
2 eggs
1 tsp. salt
1½ tbsp. butter
1 pt. scalded milk
⅛ tsp. pepper

Drain water from corn. Add to corn the eggs slightly beaten. Add salt, pepper, melted butter and scalded milk. Stir thoroughly and turn into a buttered baking dish. Bake in a slow oven until firm.

Vegetables Especially for Children

Many of the following receipts give the preparation of vegetables for children. In cooking for adults it is not necessary to put the cooked vegetable through a sieve.

Vegetables good for little children are: asparagus tips, string beans, stewed celery, young beets, carrots, squash, potatoes.

White Potatoes

These should be baked, boiled or mashed, never fried for children. They may be served with beef juice or milk.

Peas

Cook peas, if possible, the day they are picked. Boil for at least thirty minutes in a granite saucepan. Salt before taking from the fire. Press through a sieve before giving these peas to a young child.

Spinach

Carefully pick over, take out wilted leaves, wash in four or five waters. Cook in boiling salted water for half an hour. When spinach is young and tender, it will boil in its own moisture and no water needs to be added. Strain, chop, and press through a sieve.

Asparagus Tips

Use only the soft part that will snap off. Wash, remove scales and boil in salted water for one half hour. Strain and press through a sieve, or serve whole.

String Beans

Cut off strings and cut into one inch pieces. Wash and cook in boiling water from two to three hours. Add salt at the last.

Stewed Celery

Cut off roots and leaves. Separate stalks, wash, scrape and cut into one inch pieces. Boil in salted water one half hour or more. Strain. Mix this celery with a sauce made of one half celery water and one half milk. Season with salt to taste.

Young Beets

These roots contain much sugar and are not, when fresh and young, indigestible for a child over five years of age. Wash the root without bruising it. Cut off the top at least one inch from the beet. Cook in boiling water from one to two hours. Salt, drain and put into cold water. Then remove skins and chop fine.

Carrots

Wash and scrape carrots. Boil in salted water until soft enough to press through a sieve. The length of time of boiling depends upon whether the carrot is young or old.

Squash

Squash should be young, tender and thin skinned.

Wash squash and cut it in thick slices. Cook one-half hour (or until very soft) in boiling salted water. When done turn into a piece of cheesecloth, or a fine sieve and drain out all the water. Now mash, and strain again through the sieve. Season with a little butter, salt and (for children) very little, if any, pepper.

Macaroni

Macaroni (or spaghetti) is a very nourishing food. It is formed chiefly of gluten, which is the more valuable part of wheat. It is more digestible than meat, and has some of the same tissue building quality.

To prepare macaroni, have the water boiling and salted in the saucepan before adding the sticks of macaroni. Drop these sticks in one by one so as not to stop the water from boiling. Boil for twenty minutes, drain off the water, pour over it cold water, put the macaroni back in the saucepan, adding a cream or white sauce, and allow it to simmer at the back of the stove for a few minutes.

CHEESE

Any girl who studied " Practical Homemaking " learned in Chapter V that cheese had so much food value that it was often used as a substitute for meat. A pound of cheese has as much food value as a gallon of milk. It contains all the protein and fat of the milk with the water taken out. Therefore, it is very necessary for each housekeeper to know as many ways as possible for using cheese.

Cheese Crackers

Spread grated cheese on Uneeda biscuit, or on any plain cracker, and sprinkle with a few grains of Cayenne pepper. Put these cheese crackers in a baking tin and brown in the oven. These are very good served with salad, or with afternoon tea.

Cheese Fondu

1 tbsp. butter
1 cup milk
1 cup bread crumbs
1 cup grated cheese
2 eggs, well beaten
¼ tsp. mustard
¼ tsp. salt

Melt the butter and add milk, bread crumbs, cheese, salt and mustard. Cook over hot water until the cheese melts. Then add the eggs and cook for two or three minutes longer. Pour into a greased baking dish and bake about twenty minutes in a moderate oven. This must be served at once.

Cottage Cheese

Put thick sour milk into a pan on the back of the stove until the curd has separated from the whey. Then pour into a piece of cheesecloth and drain the whey from the curd. Season the curd which remains with salt and pepper. If desired, a little cream can be added.

Creamed Eggs with Cheese

This receipt is given on page 166 with the Egg Receipts.

Rice with Cheese

(For 8 persons)

Steam one cup of rice, allowing one tablespoon of salt. Cover bottom of buttered pudding dish with this rice. Add in small pieces one tablespoon butter. Sprinkle with thin shavings of cheese and a little paprika. Repeat until all the rice and one-fourth pound of cheese are used. Add milk to half the depth of contents of dish, cover with cracker crumbs and bake until cheese melts and top browns.

Baked Macaroni with Cheese

(For 8 persons)

Put a layer of boiled macaroni in buttered baking dish. Sprinkle with grated cheese and white sauce. Repeat. Cover the whole with butter, a few bread crumbs and a last layer of cheese; bake until the crumbs are brown.

Cheese Sticks

1 cup flour
1 tbsp. melted butter
½ cup grated cheese
1 tsp. baking powder
A little salt and enough milk to make stiff dough.

Mix all together and roll out, then cut in strips. Bake on brown paper until a light brown.

MUFFINS, BREADS, ETC.

Johnny Cake

Cream one tablespoon butter with one of sugar. Add one beaten egg, one cup of milk, a pinch of salt, one cup flour and three teaspoons baking powder. Now add one cup cornmeal. Mix all thoroughly together and fill muffin tins with this mixture. Bake in a moderate oven twenty minutes.

One Egg Muffins

(For 8 persons)

2 cups flour
1¼ cups milk
1 egg
1 tbsp. melted fat or butter
3 tsp. baking powder
1 tsp. salt

Mix and sift dry ingredients. Add milk and beaten egg. Beat thoroughly. Add melted butter or fat the last thing. Bake about twenty minutes in buttered gem pans.

No Egg Muffins

(For 8 persons)

2 cups flour
1 cup milk
1 tbsp. butter
3 tsp. baking powder
½ tsp. salt

Mix and sift dry ingredients. Stir in milk and beat well. Add melted butter last. Bake about twenty minutes in buttered gem pans.

Oatmeal Muffins

(For 8 persons)

⅔ cup rolled oats — 1 cup scalded milk

Mix these together and allow to stand until cold. Add

3 tbsp. sugar — 1½ cups flour

2 tbsp. melted butter — 1 egg

4 tsp. baking powder — ½ tsp. salt

Mix well, and bake twenty or twenty-five minutes.

Corn Bread

(For 6 persons)

1 cup corn meal — ¾ tsp. salt

1 cup flour — ⅓ cup sugar

1 cup milk — 2 tsp. baking powder

1 egg — 2 tbsp. melted butter

Mix together corn meal and white flour, salt and sugar and baking powder. Sift twice. Beat egg until very light, to the egg add milk and melted butter. Unite the two mixtures and beat hard until smooth. Bake in a buttered, shallow pan in a hot oven twenty-five or thirty minutes.

Baking Powder Biscuits

(For 12 persons)

2 cups flour — 4 tsp. baking powder

¾ cup milk and water in equal parts — 1 tsp. salt

1 tbsp. butter

1 tbsp. lard

Mix dry ingredients and sift twice. Cut in butter and lard. Add liquid, mixing with a knife. Toss on a floured board, pat and roll. Cut with biscuit cutter. Bake in hot buttered pans fifteen minutes.

Short Cake

(For 12 persons)

2 cups flour
¾ cup milk
4 tsp. baking powder
1 tbsp. lard
1 tbsp. butter
1 tsp. salt

Mix dry ingredients and sift twice. Cut in butter and lard with a knife. Gradually add the liquid. Roll to a thickness of one-half inch.

When short cake is cooked, take from oven and slit open. Fill with any fresh fruit; strawberries are the best. Mash these slightly, keeping out a few of the best to put on the top of the cake. Place the crushed fruit between the upper and lower crust.

Peaches cut up and sugared are also a good fruit to use.

Dried Bread

Cut the bread into thin slices. Place in the oven with the door open. Dry until crisp, but do not burn.

Buckwheat Griddle Cakes

1 cup buckwheat flour
⅓ tsp. salt
1 tbsp. sugar
2 tsp. baking powder
¾ cup cold water
¾ cup milk

Sift dry ingredients. Add water and mix thoroughly. Drop on hot griddle and turn with pancake turner when brown on one side.

Corn Meal Griddle Cakes

2 cups milk
½ cup corn meal
1 tsp. salt
3 tsp. baking powder

Enough flour to make a smooth batter, but thin. Stir all together and bake on hot, well-buttered griddle or large frying pan. If sour milk is used, use one-half tea-

spoon soda dissolved in one-fourth cup hot water and two teaspoons baking powder instead of three teaspoons baking powder.

Sour Milk Griddle Cakes

2½ cups flour
½ tsp. salt
2 cups sour milk
1 egg
2 tsp. soda

Mix and sift dry ingredients. Add sour milk and beaten egg. Have griddle very hot and greased. Turn when brown and cook on other side. Serve hot with syrup or molasses.

Brown Bread

2 cups sour milk
1 cup sugar
3 cups graham flour
1 cup white flour
4 tsp. salt
2 tsp. soda

Sift dry ingredients, except graham flour. Dissolve baking soda in sour milk, add graham flour to other dry materials and stir in milk. Bake in two loaves in well-buttered pan.

Oatmeal Muffins

For these muffins use leftover oatmeal.

1½ cups cooked oatmeal
1 cup flour
2 tbsp. sugar
½ cup milk
2 tsp. melted butter
½ tsp. salt
4 tsp. baking powder

Mix and sift dry ingredients (flour, sugar, baking powder, salt). Add to this one-half of the milk and whole egg well beaten. The remainder of the milk should be mixed with the oatmeal and beaten thoroughly. Now add dry ingredient mixture to oatmeal mixture, adding to

the whole the melted butter. Bake in buttered muffin pans for fifteen or twenty minutes.

Bread Omelet

½ cup soft bread crumbs
4 tbsp. milk
1 tsp. butter
2 eggs
¼ tsp. salt
Pepper

Soak the bread crumbs in the milk until the milk has been absorbed, and then add salt and pepper. Separate the yolk from the white of egg. Beat the white stiff. Add beaten yolk to the bread crumbs. Fold in the white and proceed as in a plain omelet.

Mushrooms and Bread Omelet

5 mushrooms
2 tbsp. butter
2 eggs
1 cup bread crumbs
1 tbsp. cheese
Leaf of marjoram

Clean mushrooms, cut into rather small pieces and put in a frying pan with butter and salt. Fry lightly until the mushrooms are brown. In the meantime beat up separately yolks and whites of eggs, add to the eggs the bread crumbs which have been soaked in water, add also the cheese grated, and two leaves of marjoram. Go on beating until the bread has become absorbed by the eggs. Pour this mixture into the frying pan with the mushrooms, mix all together and make omelet in usual way.

Zwieback

Zwieback is Vienna bread or rusks. Cut bread into slices and dry in a slow oven until the bread is of a deep yellow color.

SAUCES

Horseradish Sauce

½ cup horseradish
½ cup cracker dust
1 tsp. salt
Pepper
½ cup cream
1 tsp. mustard
¼ cup vinegar
2 tsp. powdered sugar

Mix salt, pepper, cracker dust and horseradish. Make paste of mustard and cream and add it, with rest of cream, to mixture. Add full amount of vinegar if horseradish is fresh, and heat the whole over boiling water. Serve hot.

German Horseradish Sauce

½ cup horseradish
Vinegar to cover
2 tsp. sugar
1 tsp. salt
1 sour apple grated

Mix all thoroughly and serve cold.

Tomato Sauce

(For Omelet or Meat)

1 cup tomato
½ tsp. salt
½ tsp. sugar
1 onion
½ green pepper
A little parsley
1 tbsp. butter

Fry butter, chopped onion and green pepper together. Cook tomato until quite thick (at least one-half hour). Add this tomato to butter and onion. Chop parsley and

add to tomato mixture. Cook all together for a few minutes with salt and pepper and sugar. Serve hot.

White Sauce

(For 6 persons)

2½ tbsp. butter
3 tbsp. flour
½ tsp. salt
Pepper
1 pt. milk

Melt butter in upper part of double boiler or saucepan. Add flour and salt and stir to a smooth paste. Remove from fire. Stir in milk. Put back on fire, or over hot water if made in double boiler, and cook until sauce thickens.

Cream Sauce for Oysters

4 tbsp. flour
Piece of butter the size of 2 eggs
Cut up 1 cup celery and boil it. Press through a sieve.
Scald 1 qt. milk.

Cream together flour and butter, add this to scalded milk. Add celery and cook about fifteen minutes. Cook oysters in their own liquor a few minutes and then add to cream sauce with a part of its own liquor. Serve on toast.

Onion Sauce

2 tbsp. dripping, before melting
3 tbsp. flour
3 onions
Salt and pepper

Melt drippings, add flour. Let this brown in the frying pan. Add enough water to make a creamy sauce. Let this cook for ten minutes. Cut onions in rings and fry in the sauce until a golden brown. Season with salt and pepper.

SALADS

Boiled Dressing

2 tbsp. sugar
½ cup milk
½ cup vinegar
1 tbsp. butter
¼ tsp. pepper
1 egg (not absolutely necessary)
2 tbsp. flour
1 tsp. salt
1 tsp. mustard

Mix dry ingredients and stir to a smooth paste with the milk. Beat this well, add the vinegar and blend together thoroughly. The last thing add the butter and the beaten egg (if egg is used). Cook until the mixture thickens.

Mayonnaise Dressing

Yolk 1 egg
½ tsp. salt
About 1 cup salad oil
1½ tsp. lemon juice or vinegar
A little pepper

Be sure that the oil and egg are cold before beginning the dressing. Also, the dish in which the dressing is made must be cold. In summer it is often necessary to chill the plate with ice.

Have yolk of egg free from all white. Add oil to yolk very slowly, at first drop by drop. After the egg begins to thicken the oil can be added a little faster. Add oil until egg will hold no more and the dressing is too thick to pour, now add seasoning and vinegar and a little mustard.

The difficult part of mayonnaise dressing is to keep it from curdling. The cold egg, cold oil and cold dish should prevent this, if oil is added drop by drop at first.

If the dressing does curdle, a tiny piece of ice added sometimes brings it back.

Do not throw away the egg if it does curdle, but add the curdled mayonnaise slowly to a fresh yolk.

French Dressing for Salad

½ tsp. salt
¼ tsp. pepper
½ tsp. mustard
2 tbsp. vinegar
6 tbsp. oil
Onion

Mix salt, pepper and mustard together (a little onion juice adds much to the flavor). Pour oil slowly on mustard and salt mixture, stirring thoroughly. Add vinegar the last thing. No good cook will depend absolutely on a written receipt for French dressing, but will depend upon her own taste as to whether there is salt or pepper enough, or whether she should add a little more oil or a little more vinegar.

When greens are used for salad they should first be washed and then allowed to stand in very cold water until thoroughly crisp.

Potato Salad

6 good-sized cold potatoes
1 onion
A little parsley
At least, 1 cup French dressing as potatoes absorb a great deal

It is better to boil the potatoes with skins on and remove them after potato is cold.

Cut potatoes into small thin pieces. Chop parsley and onion, and mix all with French dressing. Serve on lettuce leaves.

Remember you can never trust entirely to a receipt; taste before serving to be sure the seasoning is perfect.

Potato salad can be mixed with boiled dressing instead of French dressing.

A Few Suggestions for Salads

Water Cress and Apples

Have water cress cold, crisp and dry, as with lettuce. Slice apples thin. Serve with French dressing.

Celery used for a salad should be washed, scraped and cut into pieces one-half inch long.

Cucumber and Tomato Salad

Slice cucumbers and tomatoes, and so arrange them as to look well on lettuce.

Salad with Hard-boiled Eggs

Boil eggs, slice and serve on lettuce, or stuff egg as in picnic receipt, serve in halves on lettuce with French dressing or Mayonnaise.

Celery and Walnut Salad

Use one-third as much chopped walnuts as chopped or cut up celery. Mix well the celery and nuts with Mayonnaise. Serve one spoonful of the mixture on each lettuce leaf.

Fruit Salads

Such fruits as orange, grape fruit and grapes make a delicious salad, and can be used in place of dessert.

Be sure there are no seeds left in the fruit.

Cut the orange in thin slices.

Separate grape fruit from skin. This can be done by cutting grape fruit in half and cutting good part away from bitter skin with sharp knife.

Cut grapes in halves and remove seeds.

Fruit salads are served with boiled or French dressing.

Cold meats and cold fish make good salads.

The meat must be free from all skin and gristle, and the fish free from bones and flaked.

Vegetable Salads

Salads such as lettuce, water cress, cucumber, tomato, contain very little nourishment, but they help the appetite and are valuable for the water and salts they contain. The olive oil used in the dressing contains much nourishment and is a valuable fat for the system.

Nearly all vegetables can be served as salad. They must be fresh and they must be cold. If there is any green, the leaves must be crisp and dry.

In serving lettuce, be sure no water is on the leaves when French dressing is added, for the water will spoil the dressing and the oil will not adhere to the lettuce if damp with water.

Never put dressing on lettuce until the moment of serving.

Beets, peas, beans, cauliflower, lima beans, all make delicious salads.

If fresh vegetables are used:

Boil vegetables in salted water. Drain and allow to get very cold. Then mix with French or boiled dressing, and serve on lettuce leaves.

If left over vegetables are used, be sure they are cold and arranged in an attractive way.

Beets should be cut in even cubes.

String beans in tiny lengthwise strips.

Cauliflower into small flowers.

Where several vegetables are used in the same salad, each should be separately mixed with dressing before putting into dish.

COLD DESSERTS

Dried Apple Sauce

½ cup dried apples
2 tbsp. sugar
1 cup cold water
A little nutmeg

Soak dried apples over night, then cook the apples with sugar, nutmeg and water for three-quarters of an hour. Add more water as needed.

Fresh Apple Sauce

4 apples
Lemon
½ cup sugar

Wash, quarter, core and pare four apples (sour apples preferred). Make a syrup of boiling water, sugar and rind of lemon cut into small pieces. Cook the apples in this syrup until soft.

Apple Snow

First make apple sauce from dried or fresh apples.
1 cup apple sauce (strained)
¼ cup sugar
White of 1 egg
Lemon juice and grated rind

Beat all together until white and fluffy. Serve with boiled custard.

Soft Custard

2 cups scalded milk
Yolks of 3 eggs or 2 whole eggs
⅛ tsp. salt
¼ cup sugar
½ tsp. vanilla

Scald milk. Beat eggs slightly, add sugar and salt. Add hot milk to egg mixture so slowly as to prevent

lumping. Pour all back into double boiler and cook until mixture coats the spoon. Now remove at once from the fire and flavor and cool. If cooked too long the custard will curdle. If eggs are expensive two tablespoons of cornstarch may be substituted for one egg.

Junket

Heat one cup of sweet milk in a clean enameled saucepan. Dissolve a junket tablet in one tablespoon of cold water. Turn this into the warm milk, and stir just enough to mix it. Add a very little sugar and vanilla or chocolate flavor. Turn into a bowl to cool. A beaten egg added just before taking from the fire adds to the nourishing quality.

Blanc Mange

Into a pint of boiling fresh milk stir two tablespoonsful of cornstarch made smooth in a little cold milk. While thickening, add two tablespoons of sugar and one-half cup of the juice of some fruit or chocolate. Turn into a double boiler and let it steam for half an hour. Pour into molds and let it cool. Serve with cream.

Ice Cream

Scald a pint of milk in a double boiler. Thicken with one tablespoonful of cornstarch, which has first been rubbed smooth with a little cold milk. Add one egg (beaten) and one cup of sugar. When it thickens set aside to cool. Flavor and freeze. A pint of cream whipped and added before freezing will make the ice cream richer.

Baked Custard

4 cups scalded milk — ½ cup sugar
4 eggs — ¼ tsp. salt
A little grated nutmeg

Beat eggs slightly, add sugar and salt and scalded milk. Strain into buttered pudding dish. Sprinkle with nutmeg. Place dish in pan of warm water. Bake in slow oven until firm. Run a knife blade into custard. If knife comes out clean custard is done.

Caramel Custard

(For 6 persons)

½ cup sugar
2 cups milk (scalded)
⅛ tsp. salt
¼ tsp. vanilla
2 eggs

Melt sugar in saucepan. Add scalded milk and cook until free from lumps. Pour slowly into beaten egg. Add vanilla. Bake in dish placed in pan of hot water in a moderate oven until knife blade put in center comes out clean.

Lemon Milk Sherbet

(For 6 persons)

1 qt. milk Juice of 3 lemons 1½ cup sugar

Mix the juice and sugar together and gradually stir in the milk. Freeze in an ice cream freezer and serve.

Junket Ice Cream

Heat three-fourths cup of sugar in one quart of milk and one cup of cream. When lukewarm add one junket tablet dissolved in cold water. Pour directly into the freezer. When it begins to thicken flavor with vanilla, chocolate or any fruit syrups and freeze.

BAKED PUDDINGS AND PIES

Indian Meal Pudding

Three tablespoons of meal in one pint of boiling milk. Let it boil a few minutes. Add one pint of cold milk, two beaten eggs, four tablespoons molasses, one tablespoon butter, one-half teaspoon salt and one-half teaspoon ginger. Butter dish, and bake slowly three hours.

Bread and Butter Apple Pudding

Put in bottom of a baking dish some apple sauce. Cut stale bread in slices and cut in small squares. Spread with softened butter and brown slightly in the oven. Arrange closely together over the apple. Sprinkle generously with sugar, to which add a few drops of vanilla. Bake in a moderate oven and serve with hard sauce (or any pudding sauce desired).

Apple Dumplings

(For 6 persons)

2 cups flour	3 tbsp. butter
⅔ cup milk	3½ tsp. baking powder
6 apples	½ tsp. salt

Mix dough as for biscuits (see baking powder biscuits). Roll and cut large enough to cover an apple. Pare and core apple, fill center with sugar and squeeze in a little lemon juice. Place this apple in the middle of dough and draw piece of dough up over each apple, pressing the edges together at the top. Put on floured

tins and bake in a moderate oven until apples are tender. Serve with hard sauce or molasses sauce, or melted butter and sugar. (See pudding sauces.)

Apple Pudding

Fill a buttered pudding dish with alternate layers of bread crumbs and apple sauce which has been sweetened with brown sugar and slightly spiced. A tablespoonful of melted butter mixed with the top layer of crumbs will give a crisp crust. Cover with a plate and bake slowly for one-half hour. Remove the cover for the last five minutes and brown on top. Raw apples sliced or chopped may be used, but in that case the pudding must be baked for an hour or until the apples are tender. Serve hot with sauce.

Spiced Pudding

Soak one packed cup of the browned crusts of bread in one pint of scalded milk until soft. Then add one-half cup of molasses, one tablespoon salt, one-fourth teaspoon of spices, one-half cup of raisins. Stir occasionally at first, and bake in a very moderate oven. Serve with hard sauce.

Steamed Rice with Chocolate Sauce

Steam rice in double boiler, or boil for thirty minutes, as in "Boiled Rice" receipt. Serve this rice with hot chocolate sauce.

Scalloped Apples

(For six persons)

1½ cups apples	Nutmeg
1 cup bread crumbs	Cinnamon
1½ tbsp. butter	⅛ tsp. salt
¼ cup sugar	½ cup boiling water

Melt butter and stir crumbs and butter together. Put one-fourth of them in bottom of buttered pudding dish. Then put in a layer of one-half of the apples. Mix sugar, salt, spices and lemon rind and sprinkle one-half of this over apples in dish. Now repeat with another layer of crumbs, apples and lemon. Add the water. Sprinkle crumbs on top. Cover and bake thirty to forty-five minutes, or until apples get soft.

Apple Tapioca

(For eight persons)

¾ cup minute tapioca
2½ cups boiling water
½ tsp. salt
½ cup sugar
7 sour apples

Add 4 more cups of water and ½ tsp. salt. Cook in double boiler until transparent.

Core and pare apples and put in buttered pudding dish. Fill cavities of apples with sugar and a little lemon juice. Raisins and nuts may be put in the center also. Pour the tapioca over the apples and bake in a moderate oven until the apples are soft. Serve with sugar and cream or with one of the pudding sauces.

Peaches, pears, bananas, cooked figs or quinces can be substituted for apples. Bread crumbs sprinkled on top of pudding will brown, also keep the moisture in.

Plain Bread Pudding

1 cup bread crumbs
3 tbsp. sugar
2 cups milk
½ tsp. salt
1 egg

Lemon Bread Pudding

1 cup bread crumbs
2 cups milk
1 egg
4 tbsp. sugar
½ tsp. salt
Rind of 1 lemon

Chocolate Bread Pudding

1 cup bread crumbs
2 cups milk
1 egg
8 tbsp. sugar
½ tsp. salt
1 oz. chocolate

Soak crumbs and milk until crumbs are soft. Beat egg with sugar and salt and add this to the soaked crumbs. Put into a buttered dish and bake in a moderate oven for thirty or forty minutes, or until a knife can be put into the pudding and come out clean.

Serve plain puddings with milk and sugar. Chocolate pudding with chocolate sauce, and lemon pudding with a lemon sauce.

French Toast

1 egg
½ cup milk
1 tsp. sugar
4 slices bread
1 tbsp. butter
⅛ tsp. each salt and pepper

Beat egg slightly, and add salt, sugar and milk. Soak bread in mixture until soft. Have buttered griddle very hot. Fry bread on griddle, browning first on one side and then on the other. This can be served for breakfast or luncheon, or with a sauce can be served as a dessert.

Rice Pudding

4 cups milk
⅓ cup rice
½ tsp. salt
⅓ cup sugar
A little grated nutmeg or 1 tsp. vanilla

Wash rice in at least three waters. Mix all ingredients

together in a bowl. Pour into a buttered baking dish. Bake three hours in slow oven.

It would not be possible to use in class a receipt that takes so long a time to bake. Therefore, when time is limited: Wash rice. Put in scalded milk, steam twenty minutes, add sugar, salt and flavoring. Pour in buttered baking dish and bake thirty or forty minutes.

Parson's Pie

Cut apples into eighths and fill your pie plate full. Pour over the apples two-thirds of a cup of molasses and one teaspoon of cinnamon. Cover this with a pie crust and bake until the apples are done.

PUDDING SAUCES

Brown Sugar Sauce

1 cup water
2 tsp. lemon juice
1 tbsp. butter
1½ tbsp. flour
¾ cup brown sugar
A little nutmeg

Mix sugar and flour together, pour over it boiling water. Cook until clear and slightly thick. Add butter just before taking from the stove, and lemon just before serving.

Caramel Sauce

½ cup caramel
4 tbsp. flour
½ cup water
3 tbsp. sugar
½ tsp. vanilla

To make caramel, melt one-half cup of sugar, stirring constantly but not allowing it to burn or get dark. Take it from the fire for a minute and add one-half cup boiling water. Return to fire and boil until smooth. This caramel will keep for a long time.

Mix flour and sugar with a little water until smooth. Add this to the caramel and cook until slightly thick and clear. Add vanilla.

Fruit Sauce

White of 1 egg
⅔ cup of fruit juice
⅔ cup powdered sugar
Lemon juice

Put unbeaten white of egg in bowl, add fruit and sugar gradually, beating in with the Dover egg beater. Beat until smooth and thick. Lemon juice is added to bring out the flavor of the fruit and less sugar is needed if fruit is sweet.

Hard Sauce

Pour one tablespoon boiling water over one-half cup of butter. Stir until creamy and then mix in one cup of granulated sugar. Flavor with nutmeg or lemon or vanilla. Serve cold.

Molasses Sauce

1 cup golden drip syrup
2 tbsp. vinegar or juice ½ lemon
Pinch of salt
1 tbsp. butter
A little vanilla

Cook all together until the mixture begins to thicken, then take from stove and cool, or the sauce can be served hot.

Chocolate Sauce. No. 1

1 cup sugar
2 tbsp. cocoa
Pinch salt
1½ tbsp. cornstarch
2 cups boiling water
1 tsp. vanilla

Mix dry ingredients. Add boiling water slowly, stirring constantly. Cook on slow fire for ten minutes. Remove from fire, add vanilla and serve hot with rice or any pudding.

Chocolate Sauce. No. 2

1 cup water
½ cup sugar
1 oz. bitter chocolate
½ tsp. vanilla
1 tbsp. flour

Mix sugar and flour. Pour over it boiling water. Cook until clear, and slightly thick. Add melted chocolate and vanilla just before taking from the stove.

CAKE

Spanish Cake

¼ cup butter
¼ cup milk
½ cup sugar
½ tsp. cinnamon
1 scant cup flour
1 egg
1½ tsp. baking powder
Pinch of salt.

Mix dry ingredients. Cream together butter and sugar. Beat the yolk of egg and add this to the milk. Now add milk and egg mixture to flour mixture, and then sugar and butter, and lastly the white of the egg beaten.

Spice Cake

½ cup sugar
¾ cup sour milk
½ cup molasses
1½ cup flour
1 egg
1 tsp. soda
1 tsp. ginger
1 tsp. salt

Mix and sift dry ingredients, excepting sugar. Combine sugar and molasses. Add to this the beaten egg, and then add to the molasses and egg mixture the flour and the milk alternately. Bake twenty minutes in muffin tins.

Dutch Apple Cake

(For 6 persons)

2 cups flour
1 cup milk, scant
3 tbsp. melted butter
3 tsp. baking powder
2 tbsp. sugar
1 egg
½ tsp. salt

Mix dry ingredients together. Add milk and egg (beaten). Add melted butter. Spread this batter about three-quarter inch thick on a buttered tin. Stick this full

of thin slices of apple. Sprinkle with sugar and cinnamon, and bake until brown. This can be served with a number of sauces, one of which is Brown Sugar Sauce.

Feather Cake

(For 12 persons)

4 tbsp. butter
1 cup sugar
1½ cup flour
2½ tsp. baking powder
2 eggs
½ cup milk

Put butter in a mixing bowl and work it with a spoon until creamy. Then gradually add sugar, continuing to cream it. Sift salt, baking powder and flour together. Separate the yolks of the eggs from the whites, beat yolks and add to milk. Now add the milk and egg mixture and the flour mixture to the creamed butter, alternating first one then the other. Add a little vanilla, and the last thing stir in the whites of the eggs beaten to a stiff froth. Bake in a shallow pan. Either butter this pan slightly or line with buttered paper. Bake about thirty minutes.

Ginger Bread

(For 12 persons)

2 cups flour
½ cup brown sugar
¾ cup molasses
1 tsp. soda
1 tsp. ginger
¾ cup sour milk
1 tsp. cinnamon
2 tbsp. butter or
1 tbsp. butter and
1 tbsp. lard

Sift together dry ingredients. Mix soda and molasses and milk, and stir slowly into the dry ingredients. Melt the butter (or the butter and lard) and add this to the whole. Bake from twenty to thirty minutes in moderate oven. Test with a toothpick kept for the purpose, not with a broom straw.

Cinnamon Cakes

(For 12 persons)

½ cup butter
1 cup sugar
Yolks 2 eggs
½ cup milk
1¾ cups flour
3 tbsp. baking powder
1 tbsp. cinnamon
Whites 2 eggs

Cream butter and sugar. Beat yolks of eggs, add milk. Add egg and milk to butter and sugar. Sift all dry ingredients and add to wet mixture. Beat whites of eggs stiff and fold in to mixture. Put on well buttered muffin pans and bake until done when tested.

To Test an Oven

1. Place a piece of clean white paper in oven and time with the clock. If paper browns in five minutes, oven is hot; if paper burns in 5 minutes, oven is too hot; if paper browns in eight minutes, oven is moderately hot.

2. Another test is holding the hand in the oven and counting. Your hand should feel very hot in six counts for a hot oven and in eight counts for a moderate oven.

To Test a Cake

1. Take a clean toothpick and pierce center of cake when it begins to seem done. If toothpick comes out dry and clean, cake is done. If moist, the cake is not done.

2. A cake shrinks from the sides of the pan when done, unless a pound cake.

3. Press a cake lightly with tip of finger; if it rebounds cake is done, if not cake is not done.

Cookies

1 cup butter
2 cups sugar
1 cup milk
2 cups flour
2 eggs
½ tsp. vanilla
2 tsp. baking powder

Beat butter and sugar together and to this add milk and beaten egg. Sift flour and baking powder together and add this to butter mixture.

Cookies

(For 12 persons)

1 cup sugar	3 tbsp. butter or
¼ cup milk	3 tbsp. fat
2 cups flour	2 tsp. baking powder
1 egg	½ tsp. salt

Little nutmeg

Beat butter and sugar together (hard). Add beaten egg. Sift dry ingredients together, and add to butter and egg mixture flour and milk alternately.

Hermits

½ cup butter	1 tsp. cinnamon
½ cup sugar	2½ cups flour
3 eggs	1 cup sour milk
2 tsp. soda	1 cup molasses
1 tsp. ginger	1 cup chopped raisins
1 tsp. cloves	½ cup chopped nuts

Sift dry ingredients. Add butter creamed, add molasses and sour milk in which soda has been dissolved. Lastly add the beaten eggs, raisins and nuts. Drop as thin as possible onto buttered tin.

Oatmeal Cakes

1 cup sugar	1 tbsp. butter
2½ cups Quaker Oats	1 tsp. baking powder
2 eggs	1 tsp. vanilla

Cream together sugar and butter. Add to this eggs (beaten) and Quaker Oats mixed with baking powder. Add vanilla at the last. Butter pans and dredge with flour. Drop batter on to pan and bake in hot oven.

COOKED AND PRESERVED FRUITS

Stewed Prunes

1 lb. prunes
Cold water
Pinch of salt
2 tbsp. sugar

Wash and pick over prunes. Put in a saucepan of cold water and soak for two hours. Then in the same water allow the prunes to cook until soft. When they seem nearly soft enough add the sugar and salt. Molasses can be added instead of sugar, or cook with no sugar.

Prune Jelly

⅓ lb. prunes
1 cup sugar
2 tbsp. almonds
½ box Cox's gelatine or 2 tbsp. granulated gelatine

Soak washed prunes in cold water as for stewed prunes, and stew until tender. Take out the stones and add sugar. Dissolve the gelatine in a little cold water. Add this gelatine to the prunes while boiling hot. Also add the juice of one lemon and the almonds, which have been blanched and chopped. Pour the jelly into a mold and put on ice, or cover it and put it in a cold place. This is better eaten with cream or milk.

Stewed Apricots

½ lb. apricots
1 tbsp. sugar
1 tsp. lemon juice
Pinch of salt

Pick over and wash the apricots. Put in saucepan and allow to soak for at least two hours. Then cook in

the same water until soft, adding more water if necessary. Add sugar, lemon and salt, and serve hot or cold.

Dried Apple Sauce

1 cup dried apples
3 cups cold water
¼ cup sugar or molasses
A little nutmeg

Wash apples and let them soak in cold water about a half hour. Stew in same water until soft. Add sugar and nutmeg (lemon juice can be added in place of nutmeg). Serve hot or cold.

There are many desserts made from dried fruits that can be found in any receipt book: for example Fig Pudding, Prune Soufflé, Prune Pudding, Fig Sandwiches, Fig filling for cake, Dried Apple Pie, Dried Apple Pudding.

FRUITS FOR CHILDREN

Stewed Fresh Fruits

Raw fruits are not good for children or persons with delicate stomachs. The steamed or stewed fruit is prepared by washing the raw fruit, peeling, coring it, and cutting it into quarters. It can be cooked with a little sugar.

Fruit can be cooked without extra sugar, as the sugar in the fruit is enough for children.

Steamed Apple

Pare and core the apple and drop it at once into cold water, for if it begins to discolor it is bad for the child. Put the apple into the top part of the double boiler, adding no water to the apple, but having plenty of boiling water in the lower part. When apple is soft, beat it with a spoon. Add a very little sugar and strain through a fine strainer. An agate strainer is better than tin, as the latter destroys the flavor of the apple. Apple sauce may be made instead of steamed apple, and strained in the same way.

Orange

Squeeze the juice from the orange. Strain it through a fine strainer so that no pulp remains. At first give a child two tablespoonfuls, and very gradually increase to six.

Other fruit juices which are good for children are: Peach, red raspberry, strawberry, pineapple. All of these should be strained very carefully, as neither pulp or

seeds should be given to a child. To extract the juice, it may be necessary to cook the fruit for a few moments before straining. Give fruit juice to a child in the morning; never at night.

RECEIPTS FOR MARMALADE, JAM AND JELLY

Grape Marmalade

Pick over, wash, drain and remove stems from grapes. Separate pulp from skins. Put pulp in kettle and cook until seeds separate then strain through sieve. Return pulp to kettle with skins. Add three-fourths as much sugar as fruit. Cook slowly twenty minutes. Stirring occasionally. Put in sterilized stone jars or jelly glasses.

Rhubarb Marmalade

One quart bright red rhubarb stalks. Yellow rind and pulp of six oranges. One and a half pounds of granulated sugar.

Wash and cut rhubarb in small pieces, add orange pulp and cook until thick when tried on a cold saucer. Remove from fire and add one cup of nuts which have been cut in small pieces. Cut the orange rind in strips and cook until tender; then cut in still smaller pieces and add to rhubarb. Also add one cup of raisins. Put back over the fire and boil ten minutes. Pour into sterilized jars or tumblers.

Raisins and rhubarb may be cut with scissors.

The orange rind is what imparts the bitter taste to the marmalade.

Orange Marmalade

6 large sour oranges	3½ pts. cold water
3 lemons	4 lbs. sugar

Scrub and cut fruit in slices, rejecting ends and seeds. Cover with the water and soak over night. The follow-

ing morning add sugar and cook one hour. Two cups of shredded, blanched almonds may be added just before taking from the fire.

Raspberry Jam

Pick over raspberries, wash, put in a preserving kettle and mash fine with a potato masher. Heat to boiling point and add an equal quantity of sugar. Cook slowly until thick when tried on a cold saucer. Put in sterilized jars or jelly glasses. Blackberries may be used in the same way.

Grape Jelly

Pick over grapes, wash, remove stems, put in a preserving kettle and heat to boiling point. Then mash and cook for thirty minutes. Strain through a coarse strainer to remove skins and seeds. Then put in a jelly bag and drain. Measure juice, put in the kettle and boil five minutes. Add sugar (equal portion) boil three minutes, and pour into sterilized glasses.

Do not squeeze pulp for jelly, it makes the jelly *cloudy*.

Currant Jelly

Currant jelly is made the same way as grape jelly, only currants do not need to be removed from stems at the beginning.

Crab-apple Jelly

Crab-apple jelly is made the same as grape, only apples are wiped and cut in quarters, stems and stem end being rejected. In making crab-apple jelly, the apples are cooked in enough water to come to the edge of apples in the kettle, and are cooked until tender.

Cranberry Jelly

Pick over and wash berries. For every four cups of

berries use one cup of boiling water. Cook until soft. Rub through five sieve, add two cups of sugar and cook for five minutes. Turn into glasses or a mold.

Cranberry Sauce

Pick over and wash three cups berries. Put in a saucepan with one and one-fourth cups of sugar and one cup of cold water. Boil until soft. Skim and cool.

RECEIPTS FOR THE SICK

Gruel

Wash the grain to be used (wheat, oatmeal). Use four tbls. of oats with one-half tsp. salt; cook in two cups of water in a double boiler for three hours. It will then be thick and creamy. Be watchful to see that there is always enough boiling water in the under part of the double boiler. After this long boiling, strain through a fine sieve, mix with an equal quantity of milk, a little salt, and serve at once. Mix eight tablespoons of the strained cereal with eight tablespoons of top milk.

Barley Gruel

Dissolve two tablespoonfuls patent barley in a little cold water. Stir in one pint of boiling water. Add a pinch of salt. Cook thirty minutes in a double boiler. Strain and add as much hot milk as there is gruel.

Pearl barley may be used by soaking four or five hours and then boiling four or five hours. Add water from time to time.

Oatmeal Gruel, without double boiler

½ cup oatmeal
3 cups boiling water
1 tsp. salt
½ cup milk

Add oatmeal to boiling salted water, cook one hour. Add milk and let all get hot before removing from fire. Strain before serving.

Arrowroot Blanc Mange

¼ cup sugar
1 pt. milk
2 tbsp. arrowroot
1 tsp. lemon

Heat milk to boiling point. Mix arrowroot and sugar together and a little milk to make paste. Add this paste to hot milk. Cook all in double boiler for twenty minutes and then strain. Add flavoring just before taking from fire.

Arrowroot can be purchased from any drug store.

Junket

1 qt. milk
4 tsp. sugar
2 junket tablets
¼ tsp. salt
1 tsp. vanilla

Dissolve the junket tablets in one tablespoonful of cold water. Heat the milk. Add to the hot milk the sugar, salt, flavoring and junket. When it begins to thicken take from fire; put in a glass dish and set in a warm place until firm and then put in a cool place. Serve cold.

Albumen Water

This is ordered in case of vomiting, and a child will be able sometimes to retain albumen water when no other food will stay in his stomach.

White of one fresh egg
½ pint of cold water
1 tsp. brandy
Pinch of salt

Shake all ingredients thoroughly together, and feed to child with a spoon or from the feeding bottle.

SANDWICHES

These are only a few of the many kinds of sandwiches that can be made.

Cheese Sandwiches

Mash very smooth two tablespoonfuls of cream cheese. Add one tablespoonful of melted butter and one tablespoonful of chopped parsley. Spread bread with cheese paste, being careful that none squeezes out between the slices of bread. In this case it is not necessary to butter the bread before spreading, as there is butter with the cheese.

Cheese and Nut Sandwiches

Chop any nuts fine, and mix the nuts with cheese which has been mashed smooth. The amount of nuts depends upon the taste of the maker. Spread between bread as in cheese sandwiches.

Egg Sandwiches

Boil eggs hard. The number of eggs must be determined by the number of sandwiches you wish to make. Separate whites from yolks and chop whites fine. Mash the yolks and season with pepper and salt. Or make a French salad dressing and mix it with the yolks. Stir in the whites and spread on buttered bread.

Cheese and Olive Sandwiches

Make cheese sandwiches as in cheese receipt. Chop olives fine and sprinkle on top of spread bread.

Lettuce Sandwich

Make French dressing. Dip lettuce leaves in the dressing and lay them between the slices of bread. Any green salad can be used in this way for a sandwich.

Celery Sandwich

Make mayonnaise dressing and spread the bread with it instead of butter. Wash, scrape and chop (or cut in very small pieces) the tender part of celery. Put this between the mayonnaise spread bread. Nuts chopped in with the celery add to the food value, as well as to the taste.

Meat Sandwiches

Any cold leftover meat can be used. Chop this meat and mix it with mayonnaise dressing and spread between slices of bread.

or

Spread bread with butter and use meat simply seasoned with salt and pepper. A little chopped celery added to the meat gives a good flavor.

or

Cold meat can be cut in thin slices and placed between slices of buttered bread. Sprinkle a little salt over the meat.

Fish Sandwiches

Any cold, cooked fish may be used. Take from the cooked fish all bones and skin. Mash fish to a paste, season with salt and pepper and a little lemon juice. Spread this paste between slices of buttered bread.

Raw Beef Sandwiches

Raw meat is more easily digested than cooked meat, and

for this reason is given to persons who need the nourishment but cannot digest the cooked meat.

Buy beef from the round, scrape with grain of meat and with a silver spoon or knife; spread between thin slices of bread. Sprinkle with salt and pepper. These sandwiches can be eaten cold, or put on a toaster and heated through.

Water Cress Sandwiches

Wash first, and then chop one bunch of water cress. Mix this water cress with a French dressing. Cut the bread in thin slices and butter. Between two slices of this buttered bread spread the water cress. These sandwiches are better served cold.

ITALIAN RECEIPTS

Beans and Posta

½ lb. posta
2 tbsp. oil or drippings
1 cup or ⅓ lb. beans
1 tbsp. chopped onion
½ red pepper
Little salt

Cook beans about two hours after soaking over night; add posta and cook about half an hour more; heat oil in separate saucepan with red pepper, and chopped onion. Cook half an hour with posta and beans.

Macaroni with Tomato

1 lb. macaroni
2 tbsp. oil or drippings
1 pt. can tomatoes
1 green pepper
Salt
1 tbsp onion

Cook tomato, drippings, pepper, seasoning, and onion together for one hour slowly; cook macaroni in boiling water for about half an hour; drain off water and pour cold water over macaroni, then tomato mixture over the whole. A quarter of a pound store cheese grated should be added to the hot macaroni just before serving.

Rice and Pea Soup

½ cup rice
1 cup whole dry green peas
Cook same as posta and beans

Lentils and Rice

Put lentils to soak night before; drain off water, add lentils to fresh boiling water, and cook until soft. Fry separately two tablespoons drippings, half chopped small

onion, pepper and salt; fry until onion is brown; add to this two tablespoons chopped celery and a little chopped parsley and add all to lentils. Now add rice, which has been well washed, and cook the whole for half an hour.

Dried Lima Beans

½ cup dried Lima beans ½ pound posta

These are cooked the same as beans and posta. Lima beans may be used with rice instead of posta.

If it is desired to have the lentils, macaroni, peas and beans more of a soup consistency, the water is not drained off; but the seasoning sauce, which has been cooked separately, is added to the macaroni after it has cooked for twenty minutes, the whole being allowed to cook for ten minutes more.

Polenta

1 cup corn meal 1 cup cooked tomato
2 tablespoons oil seasoning

Salt, pepper, and garlic, if desired. Boil corn meal in boiling water and salt for at least two hours; cook in saucepan tomato, oil garlic, and a small onion for at least one hour, or until tomatoes are quite thick. Place layer of hot corn meal in dish, then layer of tomato mixture, more corn meal and tomato covering whole. Sprinkle grated cheese on top.

Rice with Tomato and Cheese

One cup rice and tomato sauce, as in macaroni; two tablespoons grated cheese (Roman cheese is used by Italians). Cook rice in boiling water for half hour; drain off water, pour tomato mixture on the rice, and just before serving sprinkle grated cheese on top.

Rice and Beans

Rice and beans are cooked in the same way as posta and beans. To half cup of rice and half cup of beans a little garlic is usually added by the Italians as seasoning.

Menestra

2 cups tomato
1 onion
1 green pepper
2 tbsp. olive oil
1 stalk celery
3 carrots
1 small cabbage
3 good-sized potatoes
½ tsp. salt
2 cents' worth soup greens
A little garlic

Chop onion, green pepper and garlic and fry in oil. Chop cabbage and soup greens, and boil for about ten minutes in one quart of water. At the end of ten minutes add the carrot sliced, and the potato cut in cubes and allow to boil for half hour more. Add the tomato and the oil and onion mixture. Season, and when all are thoroughly blended together, serve.

Noodles and Cheese

½ lb. noodles
½ lb. pot cheese
Butter size of walnut
Salt to taste

Put water on to boil, with salt. Cook noodles in boiling water about half hour. Strain off water, add butter and cheese to noodles after taking from fire. Stir before serving.

Oatmeal and Potatoes

1 pound potatoes
1 onion
¼ cup oatmeal.
Butter size of walnut
Salt to taste
1 cent's worth soup greens

Put one and half quarts water to boil, with salt. Cook oatmeal in boiling salted water quarter of an hour. Add potatoes cut in cubes and boil half hour longer. While potatoes and oatmeal are boiling, fry the onion in the butter with the chopped soup greens. Add this to potato and oatmeal mixture. Season to taste.

Noodles and Milk

1½ qts. milk
½ lb. noodles
Salt to taste

Cook noodles in boiling salted water until soft. Do not strain off quite all of the water. Add boiling milk just before serving. Season to taste.

Pea Soup

1 cup dried split peas
1 onion
½ lb. noodles
2 cents' worth soup greens
Salt to taste
Butter size of walnut

Soak peas over night. In the morning boil peas slowly for about one hour. Fry chopped onion, soup greens, and butter together in a frying pan. Add to cooked peas half pound of noodles twenty minutes before serving. Add the fried onion and butter at least ten minutes before taking from fire.

Lima Beans and Barley

1 cup dried Lima beans
1 onion
Soup greens
½ cup barley
Butter size of walnut
Salt to taste

Cook beans two hours, add barley, and cook one hour longer. Add fried butter and onion mixture, as in receipt for oatmeal and potatoes.

White Beans and Rice

1 cup white beans
Butter size of walnut
¼ cup rice
1 onion
1 cent's worth soup greens

Cook beans two hours, add rice and cook for twenty minutes longer. Just before serving, add fried butter, onion, and chopped soup greens mixture, as in receipt for oatmeal and potatoes.

Beans and Green Peppers

½ lb. red kidney beans
2 peppers
½ lb. cheese
Cayenne pepper and salt to taste

Soak beans over night. In the morning, cook slowly for one hour. Chop peppers and cook with beans. Just before taking from fire, add cut-up cheese to hot beans and peppers. Serve hot on toast.

Nut Loaf

Mix together one cup ground peanuts and one cup chopped walnuts or almonds, one teaspoon salt, quarter

teaspoon pepper, two and half cups fine bread crumbs. When well blended, add two eggs, slightly beaten, and mold into a loaf. Place in a well buttered roasting tin, and cook in moderate oven about ten minutes. Then pour over it one cup hot water in which one tablespoon butter has been stirred, and bake half hour, basting as in meat. Make a gravy from the drippings.

INDEX

INDEX

Accounting, 71
Air for children, 129
Air, summer, 140
Albumen water, receipt, 228
Apple dumpling, receipt, 209, 210
Apple sauce, receipt, 206, 221
Apple snow, receipt, 206
Apple, steamed, receipt, 222
Apple tapioca, receipt, 211
Apricots, stewed, receipt, 220
Arrowroot blanc mange, receipt, 227.
Ashes, disposal of, 19
Asparagus tips, receipt, 190

Babies, food for, 118–126
Babies,
  sleeping, 115
Baby,
  bathing, 113
  care of, 104, 113–117
  dressing, 114
  nursing, 108
Baby's clothes, 97–103
Baked beans, receipt, 191
Baked custard, receipt, 207
Baking, 53–56
  time table, 159
Baking powder biscuits, receipt, 196
Barley gruel, receipt, 227
Barrels, empty, 23
Bathing a baby, 113
Bathing children, 130
Batters, 57, 58
Beans and green peppers, receipt, 236
Beans and posta, receipt, 232
Beans and barley, 236
Beans and rice, receipt, 236
Bed linen,
  laundering, 43
Beef broth, receipt, 173
Beef croquettes, receipt, 184
Beef juice, receipt, 173
Beef, methods of cutting, 85
Beef stew, receipt, 179
Beets, receipt, 190
Blanc mange, receipt, 207
Blankets, laundering, 47
Blood stains, to remove, 41
Bluing water, 44
Boiler for laundry, 33
Boiling, 53
Bones, location of in beef, 84
Bottles, 23
Bottles for feeding infants, 123
Braised beef, receipt, 183
Bread and butter apple pudding, receipt, 209
Bread omelet, 199
Bread puddings, receipts, 212
Broiling, 53
Brown bread, receipt, 198
Brown sugar sauce, receipt, 214
Brushes for laundry, 33
Buckwheat griddle cakes, receipt, 197
By-products,
  from garbage, 25
  from incineration plants, 26, 27
  from rubbish, 23

Cake, to test, 218

Calico, 39
Calory, definition of, 63
Cannelon of beef, receipt, 185
Canning fruit, 5–9
Cans, garbage, 21
Caramel custard, receipt, 208
Caramel sauce, receipt, 214
Carbohydrates, definition of, 61
Carding wool, 41
Carrots, receipt, 191
Celery and walnut salad, 204
Celery sandwiches, receipt, 230
Celery, stewed, receipt, 190
Cereals, cooking, 161
Cereals for children, receipt, 163
Cheese and nut sandwiches, receipt, 229
Cheese and olive sandwiches, receipt, 229
Cheese crackers, receipt, 193
Cheese fondu, receipt, 193
Cheese sandwiches, receipt, 229
Cheese sticks, receipt, 194
Chicken broth, receipt, 174
Children,
  air for, 129
  bathing, 130
  care of teeth, 131
  diet for, 136
  exercise for, 130
  food for, 127–139
  fruits for, 136
  gruel for, 135
  habits of, 131
  preparing soups for, 173
  sleep for, 129
Children's diseases,
  colic, 109
  constipation, 110
  convulsions, 109
  croup, 111
  diarrhea, 110
  earache, 111
  measles, 111
  mumps, 112
  whooping-cough, 112
Chintz, 39
Chocolate sauce, receipt, 215
Chocolate stains, to remove, 41
Chops, lamb or mutton, receipt, 185
Cinnamon cakes, receipt, 218
City refuse, care of, 14, 15
Clam chowder, receipt, 170
Clothes for baby, 97–103
Clothes, soaking, 43
Clothes, soiled, sorting for laundry, 36
Clothes-stick for laundry, 33
Codfish balls, receipt, 175
Codfish hash, receipt, 175
Codfish pudding, receipt, 178
Coffee stains, to remove, 41
Colic, 109
Colored clothes, laundering, 47
Constipation, 110
Convulsions, 109
Cookies, receipt, 218, 219
Cooking,
  cereals, 161
  definition and methods, 52, 53
  table of proportions, 158
Corn, baked, receipt, 192
Corn bread, receipt, 196
Corned beef hash, receipt, 181
Cornmeal and syrup, receipt, 163
Cornmeal griddle cakes, receipt, 197
Cottage cheese, receipt, 194
Cottage pie, receipt, 186
Cotton goods, 38, 39
Crabapple jelly, receipt, 225
Cranberry jelly, receipt, 225
Cranberry sauce, receipt, 226
Cretonne, 39
Croup, 111
Cucumber and tomato salad, receipt, 204

Currant jelly, receipt, 225
Custard, receipts, 206, 207

Dates, food value of, 4
Deserts, receipts, 206
Diarrhea, 110
Diet, sensible, 60–69
Diets for children, 136
Diseases of children, 109
Doughs, 56
Dressing a baby, 114
Dutch apple cake, receipt, 216

Egg sandwiches, receipt, 229
Earache, 111
Eggs, 165–167
  creamed, receipt, 166
  goldenrod, receipt, 166
  in a nest, receipt, 165
  poached, receipt, 167
  scrambled, receipt, 166
  soft-boiled, receipt, 165
  Spanish style, receipt, 167
Equipment for ironing, 34
Equipment for laundry, 30–34
Exercise for children, 130

Feather cake, receipt, 217
Figs, food value of, 4
Fish, 94
  baked, receipt, 176
Fish balls, receipt, 175
Fish chowder, receipt, 168
Fish sandwiches, receipt, 230
Flannels, 39
  laundering, 46
Flies, 144
Food,
  elements in, 61, 62
  expenditures, 66–68
  for children, 127–139
  for infants, 118–126
  requisites, 64
Foods, classification of, 61
  for hot weather, 147
French salad dressing, receipt, 203
French toast, receipt, 212
Frying, 53
Fruit,
  buying, 95
  canning, 5–9
  dried, 4, 5
  food value of, 4
  jars, testing and sterilizing, 7
  preserving, methods of, 4
Fruit salads, receipt, 204
Fruit sauce, receipt, 214
Fruit stains, to remove, 41
Fruits, cooked, receipts, 220
Fruits for children, 136
Fruits, fresh, stewed, receipt, 222

Garbage, 20–28
  cans, 21
  disposal, 22–27
  incineration of, 22, 25
  laws concerning, 20
  odors and decay, 21
  reduction of, 23, 24
Ginger bread, receipt, 217
Gingham, 39
Glue, to remove, 42
Grape jelly, receipt, 225
Grass stains, to remove, 42
Grease stains, to remove, 42
Gruel for children, 135
Gruels, receipts, 227

Habits of children, 131
Halibut, baked, receipt, 177
Hamburg steak, receipt, 180
Hanging clothes, 44
Hard sauce, receipt, 215
Hermits, receipt, 219
Hominy mush, receipt, 162
Hominy pudding, receipt, 163
Horseradish sauce, receipt, 200
Hot weather buying, 148

Hot weather,
foods for, 147
packing away for, 142
insect pests, 143–146
Household accounting, 71
Household management, 73
Hydrocarbons, definition of, 161

Ice cream, receipt, 207
Incineration of garbage, 25–27
Income, definition of, 71
Income division, 70–79
Indian meal pudding, receipt, 209
Infants' food, 118–126
Ink stains, to remove, 42
Ironing, 49
Ironing, equipment for, 34
Italian receipts, 232

Jams, 9
Jars, fruit, testing and sterilizing, 7
Jellies, 10
receipts, 225
Jelly-bag, 10
Jelly-glasses, 10
Johnny cake, receipt, 195
Junket ice cream, receipt, 208
Junket, receipt, 207, 228

Kerosene stains, to remove, 42
Kidney stew, receipt, 186
Kosher receipts, 235

Laundering,
blankets, 47
colored clothes, 47
silks, 48
starched clothes, 45
stockings, 48
table and bed linen, 37, 43
underclothes, 38
woolens and flannels, 46
Laundry equipment, 30
Laundry materials, 34
Laundry work,
cleaning tubs, 49
hanging clothes, 44
ironing, 49
removing stains, 41
soaking clothes, 43
sorting clothes, 36
starched clothes, 45
Laws concerning garbage, 20–22
Lemon milk sherbet, receipt, 208
Lentils and rice, receipt, 232
Lettuce sandwiches, receipt, 230
Lima beans and barley, receipt, 236
Lima beans, dried, receipt, 233
Linens, 37
laundering, 43–45

Macaroni and tomato, receipt, 232
Macaroni, baked, with cheese, receipt, 194
Macaroni, receipt, 191
Marketing, 80–97
fish, 94
in hot weather, 148
meats, 83–93
vegetables and fruit, 95
Marmalade, 9
grape, receipt, 224
orange, receipt, 224
rhubarb, receipt, 224
Measles, 111
Meat and rice in casserole, receipt, 179
Meat, buying, 83
Meat gravy, receipt, 186
Meat pie, receipt, 184
Meat sandwiches, receipt, 230
Meats,
cooking, 93
selection of, 92
Menestra, receipt, 234

Menus, sample, 65–68
Mince meat on toast, receipt, 180
Mildew, to remove, 42
Milk for infants, 119
Milk stains, to remove, 42
Molasses sauce, receipt, 215
Mosquitoes, 142
Muffins, receipt, 195
Mumps, 112
Mushrooms and bread omelet, receipt, 199
Mutton broth, receipt, 173
Mutton, methods of cutting, 88, 89

Noodles and cheese, receipt, 235
Noodles and milk, receipt, 235
Nursery, 106
Nursing baby, 108
Nut loaf, receipt, 236

Oatmeal and potatoes, receipt, 235
Oatmeal cakes, receipt, 219
Oatmeal gruel, receipt, 227
Oatmeal muffins, receipt, 196, 198
Omelet, receipt, 167
Onion sauce, receipt, 201
Orange, receipt, 222
Outing cloth, 39
Oven, testing, 218

Package groceries, 83
Paint, to remove, 42
Paper and rags, 23
Parson's pie, receipt, 213
Pea soup, receipt, 235
Peas, receipt, 189
Picnics, 150
Pigs in clover, receipt, 180
Plain stew, receipt, 181
Polenta, receipt, 233
Pork, methods of cutting, 90, 91
Potato pancake, receipt, 189
Potato salad, receipt, 203
Potato with meat gravy, receipt, 187
Potatoes,
  baked creamed, receipt, 188
  creamed, with cheese, receipt, 189
  white, receipt, 189
Preserves, 9
Preserving fruits, 4
Proteid, definition of, 161
Prune jelly, receipt, 220
Prunes, food value of, 4
  stewed, receipt, 220

Raspberry jam, receipt, 225
Raw beef sandwiches, receipt, 230
Receipts
  albumen water, 228
  apple dumpling, 209
  apple pudding, 210
  apple sauce, 206, 221
  apple snow, 206
  apple, steamed, 222
  apricots, stewed, 220
  apple tapioca, 211
  arrowroot blanc mange, 227
  asparagus tips, 190
  baked beans, 191
  baked corn, 192
  baked custard, 207
  baking powder biscuits, 196
  barley gruel, 227
  beans and green peppers, 236
  beans and posta, 232
  beef broth, 173
  beef croquettes, 184
  beef juice, 173
  beef kidney stew, 186
  beef stew, 179
  beets, 190
  blanc mange, 207
  boiled salad dressing, 202

braised beef, 183
bread and butter apple pudding, 209
bread omelet, 199
bread puddings, 212
brown bread, 198
brown sugar sauce, 214
buckwheat griddle cakes, 197
cakes, 216
cannelon of beef, 185
caramel custard, 208
caramel sauce, 214
carrots, 191
casserole of meat and rice, 179
celery sandwiches, 230
celery soup, 171
cereals for children, 163
cheese and nut sandwiches, 229
cheese and olive sandwiches, 229
cheese crackers, 193
cheese fondu, 193
cheese sandwiches, 229
cheese sticks, 194
chicken broth, 174
chocolate sauce, 215
chops — lamb or mutton, 185
cinnamon cakes, 218
clam chowder, 170
clear vegetable soup, 173
codfish hash, 175
codfish pudding, 178
cookies, 218, 219
corn bread, 196
corn soup, 171
corned beef hash, 181
cornmeal and syrup, 163
cornmeal griddle cakes, 197
cottage pie, 186
cottage cheese, 194
crabapple jelly, 225
cranberry jelly, 225
cranberry sauce, 226
cream of tomato soup, 168
cream sauce for oysters, 201
cream soups, 174
creamed eggs, 166
creamed potatoes with cheese, 189
currant jelly, 225
desserts, 206
dried apple sauce, 206
dried bread, 197
dried Lima beans, 233
Dutch apple cake, 216
egg muffins, 195
egg sandwiches, 229
eggs in a nest, 165
eggs, soft-boiled, 165
eggs, Spanish style, 167
feather cake, 217
fish, baked, 176
fish balls, 175
fish chowder, 168
fish sandwiches, 230
French salad dressing, 203
French toast, 212
fruit sauce, 214
fruits, cooked, 220
fruits, fresh, stewed, 222
German horseradish sauce, 200
ginger bread, 217
goldenrod eggs, 166
grape jelly, 225
gruels, 227
halibut, baked, 177
hamburg steak, 180
hard sauce, 215
hermits, 219
hominy mush with prunes, 162
hominy pudding, 163
horseradish sauce, 200
ice cream, 207
Indian meal pudding, 209
Italian, 232
jellies, 225

Johnny cake, 195
junket, 207, 228
junket ice cream, 208
kosher, 235
lemon milk sherbet, 208
lentil soup, 170
lentils and rice, 232
lettuce sandwiches, 230
Lima beans and barley, 236
macaroni, 191
macaroni and tomato, 232
macaroni, baked, with cheese, 194
marmalade, grape, 224
marmalade, orange, 224
marmalade, rhubarb, 224
mayonnaise dressing, 202
meat gravy, 186
meat pie, 184
meat sandwiches, 230
menestra, 234
milk sauce for fish, 178
mince meat on toast, 180
mock bisque soup, 171
molasses sauce, 215
muffins, no egg, 195
mushrooms and bread omelet, 199
mutton broth, 173
noodles and cheese, 235
noodles and milk, 235
nut loaf, 236
oatmeal and potatoes, 235
oatmeal cakes, 219
oatmeal gruel, 227
oatmeal muffins, 196, 198
omelet, 167
onion sauce, 201
orange, 222
parsons pie, 213
pea soup, 235
peas, 189
pies, 209
pigs in clover, 180
plain stew, 181
poached eggs, 167
polenta, 233
potato pancake, 189
potato salad, 203
potato with meat gravy, 187
potatoes, baked creamed, 188
prune jelly, 220
prunes, stewed, 220
pudding sauces, 214
puddings, 209
raspberry jam, 225
raw beef sandwiches, 230
rice and beans, 234
rice and cheese, 162, 194
rice and pea soup, 232
rice, boiled, 162
rice croquettes, 163
rice pudding, 213
rice with tomato and cheese, 233
samp, 163
sandwiches, 229
salads, 204
scalloped apples, 210
Scotch broth, 169
scrambled eggs, 166
shredded codfish balls, 175
short cake, 197
soft custard, 206
sour milk griddle cakes, 198
Spanish cake, 216
spice cake, 216
spiced pudding, 210
spinach, 190
squash, 191
steamed rice with chocolate sauce, 210
stewed celery, 190
string beans, 190
stuffed spare rib, 184
tasty hot pot, 183
tomato sauce, 200
tripe soup, 170
vegetable soup with meat, 169

vegetable soup with spaghetti, 169
water cress sandwiches, 231
white beans and rice, 236
white potatoes, 189
white sauce, 201
zwieback, 199
Reduction plant for garbage disposal, 24
Refuse, by-products from, 16
care of, 14, 15
Ribbons, washing, 48
Rice and beans, receipt, 234
Rice and cheese, receipt, 162
Rice and pea soup, receipt, 232
Rice, boiled, receipt, 162
Rice croquettes, receipt, 163
Rice pudding, receipt, 213
Rice, steamed, with chocolate sauce, receipt, 210
Rice with cheese, receipt, 194
Rice with tomato and cheese, receipt, 233
Roasting, time table, 159
Rubbing-board for laundry, 32
Rubbish, disposal of, 23

Salad dressings, receipts, 202
Salads, receipts, 204
Samp, receipt, 163
Sandwiches, 151
receipts, 229
Sauce, cream, for oysters, receipt, 201
horseradish, receipt, 200
meat, for fish, 178
onion, receipt, 201
tomato, receipt, 200
white, receipt, 201
Scalloped apples, receipt, 210
Scorch stains, to remove, 42
Scotch broth, receipt, 169
Sewage, 16
Short cake, receipt, 197
Shortening, 58
Silks, washing, 48
Skirts, ironing, 51
Sleep for babies, 115
Sleep for children, 129
Soft custard, receipt, 206
Sour milk griddle cakes, receipt, 198
Soup, celery, receipt, 171
corn, receipt, 171
clear vegetable, receipt, 173
cream, receipt, 174
cream of tomato, receipt, 168
lentil, receipt, 170
mock bisque, receipt, 171
pea, receipt, 235
rice and pea, receipt, 232
tripe, receipt, 170
vegetable, with meat, receipt, 169
vegetable, with spaghetti, receipt, 169
Soups, 168
Spanish cake, receipt, 216
Spare rib, stuffed, receipt, 184
Spice cake, receipt, 216
Spiced pudding, receipt, 210
Spinach, receipt, 190
Spinning wool, 41
Squash, receipt, 191
Stains, removing, 41
Starch, making, 45
Starched clothes, 45
Sterilizing fruit jars, 7
Stewing, 53
Stockings, laundering, 48
Stoves, for laundry, 31
Street cleaning, 14–20
Street sweepings, 16–19
String beans, receipt, 190
Summer furnishings, 141
Swill, *see* garbage

Table linen,
laundering, 37, 43, 44
manufacture of, 37

Tea stains, to remove, 41
Teeth, of children, 131
Tin cans, 23
Tomato sauce, receipt, 200
Tubs,
  cleaning, 49
  for laundry, 31

Underclothes,
  ironing, 50
  laundering, 38

Vegetable salads, receipt, 205
Vegetables, buying, 95

Wage, living, 76
Washing baby's clothes, 117
Water cress and apple salad, receipt, 204
Water cress sandwiches, receipt, 231
Wax stains, to remove, 42
Weaving, 41
Weights and measures, 158
Whooping-cough, 112
Wine stains, to remove, 42
Woolens, 40
  laundering, 46
  manufacture of, 40, 41
Worsteds, manufacture of, 40, 41
Wringer for laundry, 32

Zwieback, receipt, 199